PSYCHOLOGICAL ABUSE AND HEALTH: WHAT ROLE DOES FORGIVENESS PLAY?

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Existent literature suggests forgiveness could lead to either greater psychological abuse (reinforcement theory), or lower psychological abuse (interpersonal theory). Questionnaires were completed by 291 participants who were dating at least 2 months. More forgiveness—particularly Absence of Negativity—was related to less abuse received from their partner, and this effect was stronger for females than for males. Absence of Negativity (AN) was predictive of health variables (psychosomatic symptoms, mental and physical health), although Presence of Positive forgiveness did not predict health beyond the impact of AN. Abuse-forgiveness and assertiveness-forgiveness interaction terms were not significant predictors of health. Results indicate interpersonal theory describes the link between forgiveness and psychological abuse. Results suggest that focus on AN could be sufficient for mental or physical health change.

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INTRODUCTION

Courtship is viewed by family systems theorists as one of the many stages of the extended family life cycle (Carter & McGoldrick, 2004). As such, it lays the foundation for the pace and interaction style of long-term romantic and family relationships. Both functional and dysfunctional interaction patterns that begin during courtship often carry over into marital relationships (McGoldrick, 2004). As dating relationships become more committed, controlling or abusive behaviors tend to become more severe (Finkel, Rusbult, Kumashiro, & Hannon, 2002) and more pervasive (Billingham, 1987; Lewis & Fremouw, 2001).

Psychological Abuse

Psychologically abusive acts are strategies used to control and/or act aggressively toward one's partner (Tolman, 1989). Such behaviors include the use of control strategies—gaining compliance through demands, making threats to destroy the partner's property, and/or aggression—for example, verbal attacks or hostile withdrawal (Kasain & Painter, 1992; Murphy & Hoover, 1999). Psychological abuse is estimated to be present in 40-60% of dating relationships (Hall-Smith et al., 2002; Kasain & Painter, 1992; Lewis & Fremouw, 2001; Murty et al., 2003), and is thought to occur frequently in at least 13% of both college and community samples in the U.S. (Hall-Smith et al., 2002; Kasain & Painter, 1992). In addition, psychological abuse often precedes and accompanies physical violence or sexual assault (Follingstad & DeHart, 2000; Marshall, 2001; O'Leary, 1999; Stets, 1990). For the purposes of this paper, the terms abuse and psychological abuse will be used interchangeably, while other forms of abuse will be labeled specifically.

Research indicates that psychological abuse interferes with socio-emotional functioning. Battered women often report that the effects of psychological abuse had as much or more of a negative impact on them as did the effects of physical abuse (Follingstad, Rutledge, Berg, & Hause, 1990; O'Leary, 1999; Rinfret-Raynor & Cantin, 1997; Sackett & Saunders, 2001). For recipients of psychological abuse, acts such as having their opinion undermined, being intentionally isolated from others, and being dominated or ignored are commonplace; thus, they question themselves and interact with others tentatively (Marshall, 2001). A sense of self-worth and agency may be subverted, making them feel worthless and/or dependent (Lamb, 2002). In a sample of domestic violence survivors, acts such as ridicule, criticism and jealous control, predicted low self-esteem and fear of further abuse from their partners (Sackett & Saunders, 2001). Another study conducted in a diverse, low-income sample of women, found that psychological abuse not only predicted low self-esteem and fear of severe injury/death, but also depression and suicidal ideation beyond the contribution of sexual or physical abuse (Marshall, 2001).

Communication research found that psychological aggression, one of the two main forms of psychological abuse, is often bidirectional within a romantic relationship. A study that assessed communication patterns in couples who are physically and psychologically abusive found that when one partner is abusive, it is more likely that both partners will reciprocate verbal aggression and negativity toward one another (Chandler-Sabourin, 1995). Other research found that 50.3% of the psychologically aggressive acts (e.g., threats or stomping out of the room) that took place in undergraduate student relationships were done by both partners at some point during the past year (Carey & Mongeau, 1996), while other studies identified even higher rates of reciprocal psychological aggression (Mills & Malley-Morrison, 1998).

Forgiveness

In contrast to abuse, forgiveness is a construct that is thought to improve relationship quality. One dimension of forgiveness is the object of forgiveness: one's offender (Enright, 2001; Worthington, 2001), one's self (Mauger, 1992) and/or one's life situation (Snyder & Heinze, 2005; Yamhure-Thompson et al., 2005). A second dimension encompasses whether forgiveness is measured as a coping mechanism for a specific transgression (Lawler et al., 2005; McCullough & Fincham, 2003) or as an enduring disposition or personality trait (Lawler et al., 2003; Mauger, 1992; Yamhure-Thompson et al., 2005). The final dimension includes the process of forgiveness. The interpersonal process of forgiveness places an emphasis on the injured-offender interaction (Baskin & Enright, 2004; Zechmeister & Romero, 2002). Alternatively, forgiveness can be seen as an intrapersonal process instead, where the emphasis is on processing one's own thoughts, emotions, and behavior in reaction to the offender (Rye et al., 2001; Worthington, 2001).

Put simply, intrapersonal forgiveness is a change in the way an injured party approaches his or her transgressor. Common definitions describe a shift from negative to positive thoughts, feelings, and action tendencies toward offenders (Enright, 2001; Mauger, 1992; Worthington, 2001). For example, forgiving people may adopt empathic concern, compassionate thoughts, and warm emotions toward the one who offended them, instead of ruminating or acting out negative emotions (Berry et al., 2005; Ross, Kendall, Matters, Wrobel & Rye, 2004).

For the purposes of this paper, I only examined forgiveness of others in an intrapersonal context. Determining who is an offender and who is the injured party may be inappropriate, given that anywhere from 30-60% of abuse is mutual (Gray & Foshee, 1997; White & Koss, 1991), and aggression in one partner is more likely to be accompanied by aggression in the other

(Carey & Mongeau, 1996). Although both parties in a relationship could be an offender for different reasons at different times, I consider a person who commits a transgression as the offender and the person who received it as an injured or offended party.

Forgiveness can be compartmentalized into negative and positive factors (Rye et al., 2001; Subkoviak, Enright, Wu, 1995). Level of negativity is the extent that one holds on to negative thoughts, feelings and action tendencies (i.e., a slanderous thought, anger, and a desire to avoid or retaliate against the offender). The positive factor is the extent that one adopts accepting thoughts (i.e., mentally labeling the offender is a misguided person rather than a "jerk"), feelings of compassion, and beneficial action tendencies toward their offender. The ability to resolve a majority of adolescent and adult developmental tasks from Erikson's stages of psychosocial development, has been related to both the Absence of Negativity (AN) and the Presence of Positivity (PP; Romig & Veenstra, 1998).

Despite these commonalities, there are differences between the positive and negative factors of forgiveness. In adults, AN has been more strongly related to lesser anger, depression, anxiety, maladaptive coping, and somatic symptoms as well as greater existential well-being than PP (Maltby, Day, & Barber, 2004; Rye et al., 2001; Subkoviak, Enright, & Wu, 1995). The PP has been related to religiosity and religious well-being, extraverted personality characteristics, venting and social support to a greater extent than has absence of negativity (Maltby, Day, & Barber, 2004; Rye, Folck, Heim, Olszewski, & Traina, 2004; Rye et al., 2001; Subkoviak, Enright, & Wu, 1995).

Forgiveness & Psychological Abuse

Debate about the utility of forgiveness for abuse survivors can be found in the fields of

law, philosophy, religion, and psychology; however, empirical evidence on the costs of forgiveness is scarce (Exline, Worthington, Hill, & McCullough, 2003). Forgiveness is considered an attractive option to facilitate healthy functioning among those who were abused but are no longer in an abusive relationship, because of their need to deal with unresolved feelings toward offenders (Taylor, 2004; Reed, 2004; Freedman and Enright, 1996). Snyder and Heinze (2005, p. 9) agree, but contend "Perhaps only through psychological treatment can one be expected to forgive…if at all."

Professional assistance with the process of forgiveness reduces the likelihood of unwanted consequences (Malcom & Greenberg, 2000; Coyle & Enright, 1998) that may result from adherence to lay conceptions of forgiveness. Such consequences might entail unconditional acceptance or even reconciliation with a partner who is untrustworthy (Exline, Worthington, Hill & McCullough, 2003; Kanz, 2000; Whipple, 1987). From a philosophical perspective, forgiveness may reinforce historical social stereotypes that women need to defer to men and should not be unpleasant by showing anger. As a motivational state, anger can motivate change in women who have received abuse. Lamb (2002) fears that deliberate anger reduction after she has been legitimately offended could inhibit the self-esteem development and sense of agency that many battered women need.

This debate continues after examination of the disparity between the therapeutic process of forgiveness and forgiveness instrumentation. Forgiveness in the context of formal psychotherapeutic interventions reinforce three common ideals. First, these models require offended parties to fully acknowledge the harm that has been done to them. Second, recipients consider precautions against further harm (e.g., demanding that their offender desist, negotiating a change if possible, or getting a protective order). Finally, the person takes steps toward

developing empathy and compassion for their offender (Hargrave, 2001; Holmgren, 2002; Coyle & Enright, 1998; Walton, 2005). Such interventions do not seek to condone the transgression, forget it ever happened, or put the compromised party back in harm's way (Brown, 2003; Rye et al., 2001).

Despite these steps used in therapy, intrapersonal forgiveness measures focus primarily on an absence of negativity, a presence of empathy, and developing a compassionate approach toward the transgressor (Finkel, Rusbult, Kumashiro, & Hannon, 2002; Worthington, 2001; Enright, 1999; McCullough et al., 1998). Therefore, community members who are in abusive relationships could be rated as being forgiving towards others in general, or of their partner specifically, yet not have undergone the extended therapeutic process of forgiveness outlined by interventionists. Forgiveness measures do not account for whether the offended party truly examined the effects of the harm done, or asserted their need for fair treatment, as emphasized by broader therapeutic processes of forgiveness (Fortune, 1988). Thus, people who are deemed forgiving by current measures could have a positive outlook toward their partner, but be at risk of receiving future offenses.

This will be the first study that examines the empirical relationship between forgiveness and rate of both components of psychological abuse—control and aggression. Existent theory and research indicate that the relationship between forgiveness and psychological abuse could manifest in two different and conflicting ways.

There are reasons to believe that self-initiated forgiveness, outside of the context of formal psychological interventions, could lead to increased abuse in a behavioral reinforcement model. The empathy and positive emotion often associated with forgiving an abusive partner could act to reinforce abusive behaviors. An abusive partner could see forgiveness as acceptance

of an abusive behavior itself, rather than an acceptance of the abuser's humanity. Empirical research indicates that people who are likely to be psychologically abusive have more feelings of anger, a sense of insecurity in the relationship, and a failure to use effective problem solving skills during conflict (Hammock & O'Hearn, 2002; Schumacher, Smith-Slep, & Heyman, 2001). Since conflict resolution strategies used in intimate relationships are interpersonal behaviors learned in the context of social relationships (Reese-Weber & Kahn, 2005), perceived acceptance of abusive behavior by an aggressor would intermittently reinforce his or her abusive inclinations (Alessio, 1984).

Katz, Street and Arias (1997) found that forgiveness was associated with low self-esteem and self-blame for their partner's violence in an analogue study of hypothetical abuse. Low self-esteem has also been associated with both repeated physical abuse (Few & Rosen, 2005) and sexual revictimization (Breitenbecher, 2001; Classen, Palesh, & Aggarwal, 2005). Therefore, forgiveness may be associated with various forms of revictimization. These results may also apply to psychological abuse, which frequently accompanies these other forms of abuse (DelSol, Margolin, & Richard, 2003; Hammock & O'Hearn, 2002; Lewis & Fremouw, 2001).

At this point, whether forgiveness helps to maintain psychologically abusive relationships has not been tested empirically, although there is evidence linking forgiveness with maintenance of physically abusive relationships. In a large, primarily Caucasian sample of female undergraduates in relationships, although history of physical abuse was unrelated to whether participants reported that they would If someone forgives a physically abusive act by her partner, those who would forgive the physical abuse were more likely to say they would remain in the relationship after the physical abuse (Katz et al., 1997). These findings have some ecological validity, as physically battered women in a domestic violence shelter that were more forgiving

were also more likely to return to known violent relationships after they left the shelter (Coop Gordon, Burton & Porter, 2004).

On the other side of the fence, there is credible evidence that forgiveness of one's partner could result in decreased abuse. Forgiving individuals tend to use more constructive responses to conflict; the adaptive nature of these communication skills may head off opportunities for future psychological abuse by their partner. People who were more forgiving of a friend's or partner's most severe transgression were also more likely to elect to resolve hypothetical conflicts constructively (Karremans & Van Lange, 2004). In a sample of newlywedded couples, a disposition to forgive the partner was associated with adaptive communication patterns (Fincham & Beach, 2002).

Further evidence that forgiveness would be associated with lower levels of abuse is provided by interpersonal theory. To delineate and predict patterns of personal interactions, various circumplex models were created (Wiggins, 1996). There are three basic postulates of interpersonal theory. First, interpersonal behavior falls along two bipolar dimensions: warmth (affiliation versus hostility) and control (dominance versus submission; Horowitz, 1996; Howowitz, Dryer, & Krasnoperova, 1997). Second, behavior of one person elicits an immediate complementary response from the other person on the warmth dimension. In particular, affiliative behaviors elicit comparable affiliative behaviors, while hostile behaviors elicit reciprocal hostile responses (Horowitz, 1996; Orford, 1986), as commonly found among psychologically aggressive couples (Carey & Mongeau, 1996; Chandler-Sabourin, 1995; Mills & Malley-Morrison, 1998). Third, interpersonal actions elicit reactions of comparable intensity (Kiesler, 1983).

A review of ten empirical studies tested the postulates of complementarity in a variety of

relationships from psychotherapy to family relationships between 1957-1985. They found evidence of the reciprocal nature of affiliative behavior. Friendly behavior elicited further friendly behavior in all ten studies and hostile behavior elicited hostile behavior in six of these studies, even though therapeutic and parental relationships would restrict expressions of hostility (Orford, 1986). More recent studies examining confederate-participant relationships also found evidence of affiliative and of hostile reciprocity (Bluhm, Widiger, & Miele, 1990; Strong et al., 1988; Tracey, 1994). After controlling for the base rate of affiliative to hostile behavior, hostile interactions were indeed found to elicit more hostile interaction (Tracey, 1994). In sum, affiliative behaviors associated with forgiveness of one's partner would theoretically elicit reciprocal affiliative behavior by a partner who had been aggressive, whereas hostile or negative behaviors would likely perpetuate cycles of aggression. Note, however, that evidence presented here alludes only to the dynamics of forgiveness and aggression. Since aggression is only one component of psychological abuse, the relationship between forgiveness and reduced levels of aggression may not generalize to the control aspect of psychological abuse (Marshall, 2001; Tolman, 1989).

In sum, there is reason to believe forgiveness may be associated with less abuse. Forgiving people may experience less abuse because they are more likely to attempt constructive conflict resolution. Also, hostile or negative responses tend to reciprocate hostile behavior, thereby creating a cycle of escalation. If an offended party reacts to a character attack in a friendly or compassionate way, he or she may be less likely to escalate aggressive and psychologically abusive behaviors into a pattern of constant, reciprocal hostility in the relationship.

Assertiveness

Assertive behavior is the respectful verbal expression of one's feelings, opinions, or preferences (Leah, Law, & Snyder, 1979). Unassertive people tend to tolerate domination or humiliation, comply with undesirable, inappropriate requests, and show less expressiveness (Gervasio & Crawford, 1989). Assertiveness is situation specific; hence, people are often assertive in one context—in the office or with a partner—but not in others (Leah et al., 1979; Gambrill & Richey, 1975). In addition, assertion could include statements of either likes or dislikes, preferences or proscriptions (Burkhart, Green, & Harrison, 1979).

Empirical research reveals links between assertiveness and lower levels of psychological aggression. In a study that examined outcomes of conjoint assertion training in couples, those who received training were less likely to use aggression than were controls (Epstein, Degiovanni, & Jayne-Lazarus, 1978). Other therapy research found that women who were both psychologically and physically battered and underwent six-months of treatment to improve self-esteem and assertiveness, were less likely to receive verbal abuse or to reenter previously abusive relationships (Rinfret-Raynor & Cantin, 1997). Other research found that psychologically abusive couples in therapy were less likely to use assertive behavior than non-discordant couples (O'Leary & Curley, 1986). Therefore, studies in this area indicate there is an inverse relationship between assertiveness and levels of psychological abuse.

Only one study has examined assertiveness and forgiveness. Assertion of one's rights and displeasure was unrelated to measures of forgiveness in a sample of mixed marital status university students. Despite this, conflict management—which conceptually requires assertiveness—was moderately correlated with both dispositional and person-specific forgiveness (Lawler et al., 2005). Given that only a specific type of assertiveness was studied

here, and that a related construct was associated with forgiveness, there may yet be links between assertiveness and forgiveness.

Stress and Health

Stress has been a major focus of both psychological and medical research in the past century (Cacioppo, Tassinary & Berntson, 2000). According to the transactional model of stress, stress occurs when a person believes that demands in their environment drain or exceed their ability to cope with the demand. It has four components: a stressor, the evaluation of how taxing this stressor is, a coping mechanism, and the evaluation of the effectiveness of this mechanism (Lazarus & Folkman, 1984). Across research studies of stress, there is a set of core beliefs about what occurs when a person experiences stress: (a) the sympathetic nervous and neuroendocrine systems are activated, (b) the person becomes physiologically aroused and ready for action, (c) if the stress remains unresolved over time, a person's physiological integrity begins to break down (Critelli & Ee, 1996). All major bodily systems are affected by unresolved stress (e.g., cardiovascular, musculoskeletal, and immune systems; Guyton & Hall, 2001). Overarousal associated with stress can create certain conditions (e.g., insomnia, tension-headache), or contribute to psychosomatic illnesses (e.g., autoimmune disease or irritable bowel syndrome—IBS). Although stress is detrimental to physical functioning in its own right, it also exacerbates the effects of organic disease, including HIV/AIDS, diabetes, pain, and cancer (Schwartz & Andrasik, 2003). Hence, physical health is ultimately an interaction of predisposing risk factors, stress, and coping (Cummings, 1999).

Psychological abuse is a stressor that poses a clear threat to physiological health. Typical psychosomatic assessments examine stress-related symptomology, such as heart palpitations and

gastrointestinal pain (Kroenke, Spitzer, DeGruy & Swindle, 1998). A diverse primary care sample of emotionally abused women had higher psychosomatic index scores than non-abused women (Wagner & Mongan, 1998). Pitzner and Drummond (1997) found psychological abuse predicted psychosomatic symptoms beyond the influence of other traumatic life events. History of psychological abuse is more common among sufferers of psychosomatic disorders (e.g., Fibromyalgia and Chronic Fatigue Syndrome) than patients diagnosed with similar organic diseases (e.g., Rheumatoid Arthritis and Multiple Sclerosis; Van Houdenhove, Neerinckx, & Lysens, 2001). Women with psychosomatic IBS had higher rates of emotional abuse after age 14 than those diagnosed with organic Inflamed Bowel Disorder (Ali, Toner & Stuckless, 2000). Diminished immunity is also a consequence of psychological abuse; ability of women to neutralize Herpes Simplex Virus Type I has been predicted by psychological abuse, even after controlling for level of physical abuse (Garcia-Linares, Sanchez-Lorente & Coe, 2004).

Forgiveness acts as a coping mechanism to reduce stress, which is thought to explain links between forgiveness and health. Coping correlates associated with forgiveness include higher levels of social support and adaptive marital functioning (Thoresen, 1999; Worthington, Berry & Parrot, 2001), type B personality traits, and active coping styles (Worthington & Scherer, 2004). Forgiveness has also been related to physiological reactions indicative of stress-reduction. For example, forgiving responses have been related to immediate reductions in heart rate, blood pressure, muscle tension (Lawler et al., 2003; Witvliet, 2001), and cortisol (Berry & Worthington, 2001). In fact, the pathway analyses showed that relationships between dispositional forgiveness and psychosomatic symptoms were mediated by perceived stress levels (Lawler et al., 2005; Lawler et al., 2001).

Some conflicting research did not find relationships between forgiveness and physical symptomology in samples of undergraduates (Maltby, Macaskill & Day, 2001), Vietnam veterans (Witvliet, Phipps, Feldman & Beckham, 2004), and elderly participants (Connery, 2002). This may be accounted for by the difference in measures used. Lawler's study used a thorough measure that concentrated on psychosomatic symptoms, while the others studies either used measures of medical problems/general symptoms or abbreviated psychosomatic scales, rather than extensive measures of stress-related symptomology.

Assertiveness is a problem-focused coping mechanism that theoretically makes direct changes in environmental stressors, which is then associated with reduced levels of stress and arousal (McCain & Smith, 1994; Lehrer & Leiblum, 1981). Empirical evidence suggests, though, that assertiveness has been linked to both increased and to decreased physiological symptomology. People who are unassertive demonstrate more dermatological symptoms of psoriasis (Gupta, Gupta, Ellis, & Voorhees, 1990), or essential hypertension (Larkin & Zayfert, 2004), even beyond the impact of rumination, hostility and aggression (Hogan & Linden, 2004). An eight-week, sixteen-hour group therapy intervention of cognitive-behavioral therapy (CBT) techniques that included assertiveness training found a significant reduction in psychosomatic illness (Tallant, Rose, & Tolman, 1989); a similar study found a reduction in symptoms of IBS (Tkachuk, 2002).

By contrast, several studies have not found a relationship between general assertiveness and psychosomatic symptomology. These results were found in a sample of mixed marital status students (Lawler et al., 2005) and among headache sufferers (Andrasik et al., 1982). A study comparing people with organic and psychosomatic irritable bowel disorders found no difference in assertiveness between the two groups (Schwarz et al., 1993). As some failures to find

statistically significant results would be expected in such research where the power is less than perfect (Tabachnick & Fidell, 2001), the evidence does appear to support a link between assertiveness and psychosomatic symptomology.

Quality of Life

Another way of measuring health is via Quality of Life (QOL), which is commonly used to track outcomes for health care interventions (Richards & Ramirez, 1997; Venkataraman, 1998) and the course of various chronic illnesses (Schlenk et al., 1998; Wu et al., 1991; Wyrwich, Tierney, Babu, Kroenke, & Wolinsky, 2005). QOL scales measure ability to function and the perceived interference that symptoms have on either physical functioning (i.e., functional quality of life—FQOL) or psychological functioning (PQOL; McHorney, Ware & Raczek, 1993). In other words, QOL is not only one's actual health status, but also his or her perception of their health (Fayers, Hand, Bjordal, & Groenvold, 1997; Felce, 1997).

Psychological abuse has been linked to poor QOL. African American women from medical clinics reported not only more stress-related symptoms, but also significantly lower FQOL than non-abused women (Wagner & Mongan, 1998). A study of female undergraduates found that higher rates of psychological abuse were associated with negative health perceptions and poorer FQOL (Straight, Harper & Arias, 2003), and similar findings were found in a stratified, population-based sample of women who responded to mail surveys (Hall-Smith et al., 2002).

Forgiveness has been associated with aspects of QOL in various contexts. In undergraduates, a forgiving personality was strongly related to PQOL and moderately related to FQOL (Berry & Worthington, 2001). Forgiveness of others has been related to more robust

perceptions of health in older participants (Toussaint et al., 2001). In a HIV seropositive sample, forgiveness predicted measures of PQOL, as well as the reduced fatigue and improved social functioning components of FQOL (Vosvick, Scherbarth & Chng, 2005).

Links between assertiveness and QOL are tentative. The CBT and assertiveness training package designed for IBS patients reported earlier was related not only to reductions in symptomology, but also improved QOL (Tkachuk, 2002). In addition, low QOL was found among Asian American women who exhibited less assertive behaviors and had low self-esteem (Loo, 1982). By contrast, several studies that employed CBT interventions, which included assertiveness training in addition to other components, failed to show improvement in QOL (Brown, 1983; Venkataraman, 1998). As a caveat, the effects of multicomponent treatment studies are hard to interpret, given that assertiveness was not measured directly as an outcome and the effects of assertiveness could not be parsed out from the effects of the other components (i.e., relaxation, time management).

Hypotheses & Questions

Given the multiplicity of measures and acronyms for health and forgiveness variables, each will be operationally identified (see Table 1). Forgiveness measures include general dispositional forgiveness of others (DFO), dispositional forgiveness of one's partner (either AN, PP, or DFP = AN + PP), forgiveness of the partner's worst transgression (FPT: current or previous, using single-item measures of forgiveness). Health measures include total stress-related symptomology (SRS), as well as the physical health component score (PHC) and mental health component score (MHC).

Table 1

Acronyms for Measures

Acronym	Measure
AN	Absence of Negativity
DFO	Dispositional Forgiveness of Others
DFP	Dispositional Forgiveness of Partner
FPT	Forgiveness of Partner's Worst Transgression
MHC	Mental Health Component Score
PHC	Physical Health Component Score
PP	Presence of Positive Forgiveness
Psyc Abuse	Psychological abuse received in past year
Psyc Abuse-SF	Psychological abuse received per month since forgiveness was granted
SRS	Stress-Related Symptomology

1. I tested the ecological validity of dispositional forgiveness. I hypothesized that a general predisposition to forgive others (DFO) and partner (DFP) are related to the degree to which individuals actually forgave their current partner's worst transgression, while controlling for transgression severity.

2. The empirical and theoretical literature on forgiveness provides credible bases for two competing expectations: (a) that forgiveness may lead to more abuse via maintenance of an abusive relationship or an approval effect or that (b) forgiveness may lead to less abuse through a reduction of hostility. Therefore, I determined whether a general disposition to forgive others (DFO), a specific disposition to forgive one's partner (DFP), and forgiveness of their partner's worst transgression in the past year (FPT) are related to more or to less psychological abuse from their partner.

3. The two components of DFP—absence of negativity (AN) and presence of positive forgiveness (PP)—are distinct constructs (Rye et al., 2001; Lawler et al., 2004). Positive feeling states are associated with prosocial behavior toward others (Carlson, Charlin & Miller, 1994; Eisenberg, Losoya, & Spinrad, 2003; Eisenberg & Miller, 1987), and since the compassionate or empathic behavior that accompanies PP is pleasant and rewarding (Ruben, 1998), I expected that PP would act as intermittent reinforcement and be associated with more abuse, since abusive partners would believe their actions were accepted. While it is not clear whether higher levels of AN will be associated with more abuse, I hypothesized (a) higher PP is associated with a higher frequency of abusive behaviors and (b) PP is more positively associated with psychological abuse than AN.

4. I tested whether the degree of forgiveness of a partner's worst transgression (FPT) is related to frequency of psychological abuse that occurred since forgiveness (SF) was granted, holding the severity of the transgression and length of time since forgiveness constant.

According to forgiveness theorists who have worked with domestically abused clients, people who benefit from forgiveness would have to assert a plan to fulfill their needs or exit the abusive relationship entirely (Lamb, 2002; Hargrave, 2001). No studies have looked at the interaction of forgiveness and assertiveness on health in dating samples. Typically, psychological forgiveness interventions combine forgiveness and assertive action (Baskin & Enright, 2004; Hargrave, 2001; Worthington, 2001). Given their respective theoretical literatures, assertiveness in forgiving participants would be expressed by respectfully asserting one's needs, while also displaying traits of forgiveness—a reduction in distress and anger, as well as an increase in empathy and compassion toward their partner. I would assume that such individuals would have their interpersonal needs taken care of and would experience less stress in the relationship.

Therefore, I hypothesized that there is an interaction effect such that participants who are highly assertive and highly forgiving receive less abuse.

After all, unassertive people would theoretically be less likely to advocate for their rights. If paired with forgiveness, then this unassertive person may be "at ease" with offenses from their partner in general, yet become hindered or bothered by continuous offenses because he or she has not advocated for change in the relationship.

5. A debate continues as to whether an absence of negativity toward one's offender is enough for injured parties to profit from the forgiveness experience, or if the benefits of forgiveness require development of warm feelings toward the offender as well (Yamhure-Thompson et al., 2005; Worthington, 2001). Forgiveness has been associated with measures of improved health in samples of mixed marital status participants (Berry & Worthington, 2001; Lawler et al., 2001), but no studies have compared physical health correlates of AN and PP. Maltby, Macaskill, and Day (2001) found that a *failure to forgive others* was modestly related to higher levels of anxiety and depression in females, but not males, and was entirely unrelated to somatic symptoms in either sex. However, a follow-up study found that AN loaded with other forgiveness variables that was linked to better mental health and less intense psychosomatic symptoms (Maltby, Day & Barber, 2004). Furthermore, another team found that the link between forgiveness and less somatic symptoms was mediated by their common relationship with negative affect (Lawler et al., 2005). In addition, strong relationships have been found between hostility or negative affect and poor physical health (Friedman & Booth-Kewley, 2003; Lawler et al., 2005; Miller, Smith & Turner, 1996), which spurs two interrelated hypotheses and two complementary questions. Counter to findings from Maltby, Macaskill and Day (2001), I hypothesized that AN is sufficient to realize a relationship between forgiveness and health.

Furthermore, I determined whether PP is associated with health beyond the impact of AN, with amount of abuse held constant.

6. Although studies have independently addressed the associations of both psychological abuse and forgiveness with health, no studies have examined the association of both variables and health. I hypothesized abuse predicts poor health and forgiveness will predict more robust health, as previously found in the empirical literature.

This hypothesis may seem counterintuitive, given that I also hypothesized that forgiveness may be associated with increased levels of abuse. Theoretically, forgiveness can be associated with more abuse in subsets of the population (i.e., those high on PP), yet be associated with better health overall. For example, it may be the case that forgiveness has a positive effect on health and a smaller negative effect on health, assuming that forgiveness is associated with receiving higher levels of abuse. In that instance, PP could have a main positive effect that results in more abuse, with abuse then having a negative effect on health. The net effect of this interaction may be relatively small as compared to the expected main effect. Such a scenario could account for the relationships found between forgiveness and physical health measures in previous literature.

In addition to the main effect of forgiveness on health, I hypothesized there is an interaction effect between forgiveness and abuse on health. I expect that participants with low levels of abuse and high levels of forgiveness may have more robust health than other participants.

7. I investigated whether there is a Forgiveness X Assertiveness interaction effect that impacts health. I expected participants with both high levels of assertiveness and forgiveness will show better health than will other participants. Among people who are assertive, high levels

of forgiveness would be associated with better health than those who are unforgiving of their partner, as seen in previous literature.

METHODS

Participants

Participants were part of an ethnically diverse, gender balanced sample (N = 300) from psychology classes. Inclusion criteria required that participants must be at least 18 years of age, were in an exclusive romantic relationship for at least two months and were unmarried. For their participation, students received course credit for 90 minutes of participation. They were recruited using a bulletin board posted at the university and through an online referral site.

Measures

A screening form asked if participants were in a romantic relationship for at least two months. A brief questionnaire included questions about the participant's and partner's sex, age, sexual orientation, ethnicity, years of education and estimated parental income. Other questions include the length of the relationship (most recently and total time—i.e., if the couple dated, separated, then started dating again), nature of the relationship (e.g., dating, exclusive dating, cohabiting), how often they have contact—either phone or face to face—with their partner (1 = < *once per month*, 5 = *daily*), and how many children they have. Finally, feelings of closeness toward their partner (McCullough & Fincham, 2003) was assessed with a single-item likert measure (1 = *not at all*, 9 = *very close*).

Psychological Abuse

Psychological abuse was measured using the Psychological Maltreatment Inventory (PMI), which measures frequency of abusive acts performed by their partner in the *past year*

(0 = *never*, 1 = *once or twice*, 2 = *3-5 times*, 3 = *6-10 times*, 4 = *11- 20 times*, 5 = *>20 times*). Five types of psychologically abusive behavior will be measured—jealousy, isolation and emotional control, attacks on self-esteem, verbal abuse, and withdrawal (Kasain & Painter, 1992). The internal consistency was Cronbach's alpha = .95. The PMI was based on the Psychological Maltreatment of Women Inventory (Tolman, 1989), which discriminated between discordant and happily married men (O'Leary, 1999). The PMI was normed for both men and women in a college dating population. High scores indicate more frequent instances of psychological abuse.

Psychological Abuse—Since Forgiveness

Psychological Abuse—Since Forgivenss was measured using an adapted version of the Psychological Maltreatment Inventory (PMI) described above (Kasain & Painter, 1992). The same items were used; however, (a) participants were asked to estimate the number of times that an abusive act occurred *per month* and (b) the scaling was changed to reflect the estimated actual number of instances to allow for maximum variance (e.g., 1 = once, 50 = 50 times, etc.) The total score reflected excellent internal consistency: Cronbach's alpha = .96.

Stress-Related Symptomology

Stress-related symptomology was measured using the Cohen-Hoberman Inventory of Physical Symptoms (Cohen & Hoberman, 1983), which assesses how much participants are bothered by stress-related symptoms (e.g., abdominal pain, headache, back pain) over the previous two weeks. The 33 Likert-type items (0 = *not at all*, 7 = *extremely bothered*) have a Cronbach's alpha = .88. In college samples, it shows moderate correlations with seeking medical

care and depression (Cohen & Hoberman, 1983). High scores indicate more participant distress over their symptoms.

Quality of Life (QOL)

Functional Quality of Life (FQOL) was assessed with the Physical Health Component (PHC) summary score, whereas Psychological Quality of Life (PQOL) was assessed with the Mental Health Component (MHC) summary score derived from the RAND 36-Item Short Form Health Survey (RAND-36; Hays, 1998). Throughout the paper, the terms FQOL and PHC or physical health will be used interchangeably, as are the terns PQOL, MHC and mental health. I used the RAND-36 scoring protocol, which compiles a weighted combination of items that assess functioning and impairment in eight basic areas to create a raw summary score: physical functioning, role limitations because of physical health, pain, emotional well-being, role limitations because of emotional health, social functioning, energy/fatigue, and general health perceptions. Summary scores are then converted to *t*-scores (Hays, 1998). The RAND-36 scoring protocol has shown adequately strong internal consistency (i.e., Cronbach's alpha $\geq .88$ for both summary scores), and test-retest reliability after seven days, $r \geq .81$ (Hays, 1998). SF-36 summary scores, which share the same items and factor structure as the RAND-36, have accurately discriminated between patients with high and low severity medical or psychiatric conditions in large-sample studies (McHorney et al., 1993). High scores indicate better QOL.

Dispositional Forgiveness of Others (DFO)

DFO is measured using the forgiveness of others scale of the Heartland Forgiveness Scale. It contains six items scored on a Likert scale (1 = *almost always false of me*, 6 = *almost*

always true of me). The forgiveness of others scale demonstrated high reliability, with an internal consistency of Cronbach's alpha = .78-.81 across three studies and has an eight-week test-retest r = .73. The forgiveness of others subscale showed convergent validity with other measures of dispositional forgiveness, such as the Mauger Forgiveness of Others scale r = .53 and the Multidimensional Forgiveness Inventory-forgiveness of others scale r = .47. It shows appropriately low correlation to non-dispositional forgiveness measures (Yamhure-Thompson et al., 2005). Higher scores reflect a greater disposition to forgive others.

Dispositional Forgiveness of Partner (DFP)

DFP is measured using the Forgiveness Scale (Rye et al., 2001). The absence-of-negative subscale has ten items, while the presence-of-positive subscale contains five items. All items are rated on a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Subscales measure affect, thoughts, and actions in response to a participant-designated person after they were "wronged." For the purposes of this study, participants were asked to designate their partner as the transgressor. Internal consistency is Cronbach's alpha = .87 for the entire scale, Cronbach's alpha = .86 for the negative and Cronbach's alpha = .85 for the positive subscale. Two-week test-retest reliability was r = .80 for the entire scale and r = .76 for each subscale. The Forgiveness Scale has high-levels of criterion validity with the Enright Forgiveness Scale (negative subscale r = .52, $p < .001$; positive subscale r = .75, $p < .001$). Higher scores indicate more forgiveness.

Forgiveness of Partner's Transgression (FPT)

FPT was measured using a series of questions about a previous transgression and their

process of forgiveness. To begin, participants were asked to think about and describe the worst thing that their partner did that offended them in the past year. Participants then wrote a short description of the transgression: what happened, who was involved, and how many months ago did it happen. Participants were also asked about their attributions (e.g., whether their partner meant to offend them, whether participants blame themselves), using four likert-type items described by McCullough, Fincham and Tsang (2003). There were also be questions asking how hurt, scared, and angry they were after the offense on ten-point Likert scales (0 = *not offended at all* to 10 = *severely*). Participants then indicated whether they forgave their partner during the past year, when forgiveness was granted in months, and if their partner was told that he or she was forgiven. A single-item Likert measure assessed previous FTP—i.e., the degree of forgiveness granted at that time (0 = *none*, 10 = *complete*), followed up by a question about current FTP—i.e., to what degree their partner is forgiven now. These single-item forgiveness measures correlate highly with the Enright Forgiveness Inventory, $r = .71$ (Rye et al., 2001); variants of this question have been used in other studies as well (Brown, 2003; Karremans & Van Lange, 2004).

Partner-Specific Assertiveness

Assertiveness was measured using the Assertion subscale of the Spouse-Specific Assertion/Aggression Scale (O'Leary & Curley, 1986). It contains 17, 6-point Likert items (-3 = *extremely nondescri*ptive, not at all like me to +3 = *extremely descriptive, very much like me*). Internal consistency is Cronbach's alpha = .87. A confirmatory factor analysis supported the factor structure of content valid items selected by a panel of eight graduate judges with an interrater-reliability coefficient of $r = .86$. Spouse-Specific Assertion scores have been used to

distinguish discordant from satisfactorily married couples (O'Leary & Curley, 1986). An analysis of assertiveness to identify principle components found four components. The first component was indicative of criticism and confrontation, whereas the other three were associated with open communication and a willingness to abstain from a partner's suggestions. Since the three latter scales were more consistent with the construct of assertiveness, I combined them into a single assertiveness scale. Higher scores indicated more assertiveness with one's spouse or partner.

Social Desirability

Social desirability was measured using the short form Marlowe-Crowne, which is an abbreviated version that contains 13 true-false items (Ballard, 1992). The scale score correlated strongly with the full scale, r = .90. Internal consistency in this study was Cronbach's alpha = .70, which is the same as the full 33-item version. The factor structure has been stable across studies. It is interpreted as a disposition to avoid social disapproval, which is salient given the socially undesirable nature of psychological abuse (Mahalik, 2005; Dutton, 1992).

Relationship Stability

Relationship stability was measured by Thoughts of Ending the Relationship (TER) scale (Katz, Arias & Beach, 2000). It contains four items measuring stability of the relationship. Items are rated using five Likert-type items (1 = *very often* to 5 = *never*). Internal consistency was Cronbach's alpha = .87. Other items assessed whether they expect the relationship to last at least another 6 months, 1 year, or 5 years using the same Likert scale.

Procedures

Participants were offered one of several times to take the survey in a group setting. All filled out a screening form to verify they have been in a romantic relationship for at least 2 months and are at least 18 years of age. Participants received an Informed Consent form written at a high-school reading level. They were further reminded that the study is voluntary and they could discontinue the study at any time without penalty. Participants were asked to sit in a distraction-free computer lab. The research assistant then read the consent form aloud. Participants received an opportunity to ask questions in a group, or to approach the research assistant individually to ask other questions as necessary. They were asked to sign the informed consent form after all questions are answered.

To minimize the risk of adverse reactions, there were a number of precautions. A research assistant remained in the computer lab to answer questions. During the study, participants could take a break, or even discontinue at any time without penalty. Participants were given a list of phone numbers, including numbers for local psychology clinics, an abused women's helpline, as well as for a 24-hour mental health crisis phone line along with their informed consent form, in case an adverse reaction cropped up after the survey was completed. Nobody chose to discontinue the procedure due to distress.

Data collection instruments were translated into electronic forms available online via the Experiment Management System. This system was used to track class credits assigned for participation and give participants access to the survey. Participants had their own password protected identification number to log on to the system.

After completing general questions on the electronic survey, participants will be asked to recall the most personally offensive transgression done by their partner in the past year, state

when it was and rate their level of forgiveness of this offense. They will then be asked to complete the frequency of psychological abuse scale again to measure the instances of abuse that occurred since granting forgiveness. Those who did not forgive their partner will be asked to recount number of psychologically abusive acts since their partner's worst transgression occurred. Participants would conclude by rating their current level of forgiveness toward their partner because of this incident.

Statistical Analyses

All data was de-identified and kept on a secure server, where it was later imported into SPSS 12.0 software. Data was screened to ensure it adequately fit the assumptions of hierarchical regression (Tabachnick & Fidell, 2001). For example, the data for each variable was plotted to determine is distributed on a unimodal curve. The data was tested for normalcy by deriving a z-score by dividing the skew by the standard error of the skew. Data was considered appropriate for use if there was not a bimodal distribution or significant outliers. Outliers were truncated to be one unit further than the mean of the next closest point on the distribution. To ensure that null results were not the result of nonlinear relationships between regression equations and predictor variables, partial plots were examined. All other statistical procedures were evaluated at alpha = .05.

1. To test the validity of dispositional forgiveness, correlational relationships between dispositional forgiveness measures (DFO and DFP) and level of current FPT were examined.

2. To test the hypotheses regarding links between forgiveness and types of psychological abuse, all dispositional forgiveness measures (DFO and DFP) and current FPT

were placed into a bivariate correlation matrix with psychological abuse subscales (i.e., total, jealousy, isolation and emotional control, attacks on self-esteem, verbal abuse, and withdrawal).

3. To determine links between components of DFP (e.g., AN and PP) and psychological abuse, these measures were correlated with psychological abuse, then compared using *t*-tests after completion of *r*-z transformations (Howell, 2002).

4. To examine whether degree of forgiveness granted is related to the amount of abuse received afterward, I created a regression equation. FPT when forgiveness was granted is the predictor and frequency of psychologically abusive acts since that point in time is used as the criterion. For people who did not forgive their partner, time begins at the transgression point and number of abusive acts are counted from that time to the present. The first block of the regression equation contains the severity of the transgression and length of time since forgiveness was granted, in order to control for these possibly confounding variables. The degree of FPT granted when their partner was forgiven is put into the second block and frequency of all psychologically abuse acts combined is the dependent variable.

5. I investigated whether there is an interaction effect between forgiveness and partner-specific assertiveness upon psychological abuse. I hypothesized that the combination of being unassertive and unforgiving is associated with receiving more abuse than found among those who are assertive and forgiving. If so, this would suggest that psychological abuse is more reactive than proactive in nature.

The interaction effects between assertiveness and forgiveness on psychological abuse or health variables was assessed. Block 1 contained DFP. Block 2 containned assertiveness. In order to determine whether there is a hypothesized interaction effect between forgiveness and assertiveness on abuse, an interaction term was placed in Block 3. If the interaction term, the

product of forgiveness and assertiveness, was significant in the regression equation, then the results were plotted using points that are 1.5 standard deviations above and below the mean for each predictor variable, with the health variable in question on the y-abscissa. An interaction effect occurs when the effect of one predictor upon a criterion measure depends on the value of another variable.

6. To test differential predictions of health based on negative and positive components of forgiveness, two sets of regression equations were calculated. The first set included an equation to see if AN alone sufficiently predicts health benefits of forgiveness. Then PP was added to see whether it significantly contributes to prediction of robust health beyond the impact of AN. The second set of equations tested components of current FPT. The first equation included revenge and avoidance to determine whether current level of negative motivation is sufficient to predict robust health. The second equation used these components and added beneficence to determine if the positive aspect of FTP is associated with more robust health beyond the influence of negativity. All health variables (i.e., SRS, MHS, & PHS) were used as outcomes for both sets of equations.

7. A hierarchical regression equation was run to test the combined power of abuse and forgiveness to predict health. Block one contained demographic or relationship variables that are significantly correlated with the criterion, to control for confounds. Block 2 contained psychological abuse, followed by DFP in Block 3.

I then determined whether there was a hypothesized interaction effect between forgiveness and abuse on health status. An interaction term, the product of abuse and forgiveness, was placed in Block 4. If the interaction term was significant in the regression equation, the results were using points that are 1.5 standard deviations above and below the mean

for abuse and forgiveness, with the health variable on the y-abscissa. An interaction effect occurs when the effect of one predictor upon a criterion measure depends on the value of another variable. For instance, if there were an interaction between forgiveness and abuse to predict health, the positive effects of increasing levels of forgiveness on health could be weaker for people who received more abuse than for those who received less abuse.

8. I also determined both the independent and interaction of assertiveness on health. A hierarchical regression equation was run to test the combined power of abuse and forgiveness to predict health. Block one contained demographic or relationship variables that are significantly correlated with the criterion, to control for confounds. Block 2 contained DFP, followed by assertiveness in Block 3.

I then determined whether there was a hypothesized interaction effect between forgiveness and assertiveness exerted upon health status. An interaction term, the product of forgiveness and assertiveness was placed in Block 4. If the interaction term was significant in the regression equation, the results were plotted using points that are 1.5 standard deviations above and below the mean for abuse and forgiveness, with the health variable on the y-abscissa.

RESULTS

As seen in Table 2, the majority of the participants were Caucasian and had a family income of more than $40,000 per year. On average, participants were in their early twenties and in their sophomore year in college. Out of the 311 participants who completed the survey, 20 married or homosexual participants were eliminated from the dataset (n = 291).

In terms of their relationship, the vast majority (85.6%) had contact with their partner at least once per day. Almost half of all participants spent at least one night with their partner per week (48.5%); an almost equal number said they either want to or plan to marry their partners (47.5%). Nearly 90% stated they were in a sexually exclusive relationship. Of the participants who reported length of their relationship (n = 195), almost half (49.7%) stated the relationship has lasted more than a year.

On average, the most severe transgression by the partner occurred in the relationship nearly four months ago. Offenses ranged from "forgot our two-year anniversary" to "cheated on me." The vast majority forgave their partner for the incident (97.9%) and two-thirds (median = 67.0%, range 0 – 11 months) stated the offense was forgiven within a month after it occurred. However, only about two-thirds (61.9%) of the combined sample actually told their partner they were forgiven.

Examination of categorical variables revealed sex differences. Females were more likely to have parents who made less than $40,000 per year, $\chi^2(1) = 4.52$, $p \leq .05$; to perceive that their relationship has a sexual exclusivity agreement $\chi^2(1) = 5.11$, $p \leq .05$, and to be exclusive with their partner, $\chi^2(1) = 6.43$, $p \leq .01$.

Table 2

Descriptive Statistics

	Female			Male			
	Mean	SD	Range	Mean	SD	Range	$F(1,251)$[a]
Age	20.27	2.49	18- 34	21.40	3.44	18- 36	13.20‡
Level of education	13.43	1.59	3- 18	13.72	1.41	12- 19	2.36*
Length of relationship	18.25	15.00	2- 63	16.38	15.71	2- 84	N/A[b]
Emotional closeness	4.29	1.02	1- 6	4.08	0.98	1- 6	2.32
Stress symptoms	29.64	20.12	0- 91	22.39	16.96	0- 77	5.98*
Physical Health	48.68	7.45	27- 61	50.52	6.93	32- 61	1.60
Mental Health	42.99	10.08	15- 66	45.93	10.18	20- 65	2.73
DFO: AN[c]	10.05	3.54	3- 21	10.82	3.57	3- 21	3.81*
DFO: PP[d]	8.36	3.02	3- 16	8.37	3.36	3- 21	0.20
DFO[e]	18.41	5.77	6- 34	19.18	5.95	6- 33	1.56
DFP: AN[f]	39.39	6.82	16- 50	39.28	7.34	17- 50	0.31
DFP: PP[g]	17.81	3.70	9- 25	16.83	4.66	5- 25	3.11
DFP[h]	57.20	9.11	30- 75	56.11	10.45	29- 75	1.38
Time since offense	3.92	3.27	1- 12	3.96	3.27	1- 12	0.18
Time since forgiveness	3.52	3.17	1- 12	3.39	2.83	1- 12	0.21
ST-ED[i]	11.69	4.49	0- 18	9.61	3.92	0- 18	10.79**
Degree forgave	7.41	2.56	0- 10	7.50	2.78	0- 10	0.39
Assertiveness w/ partner	17.18	10.99	-33- 33	12.58	10.59	-23- 32	14.09‡
Psychological abuse	29.04	23.15	0- 122	39.56	28.13	3- 145	15.50‡
Psychological abuse: SF[j]	147.62	271.88	0- 2431	213.60	420.73	1- 2174	N/A[k]

Characteristic	% Female[l]	% Male[m]	$\chi^2(1)$	
Parent income ≤ $40,000	24.3	14.0	4.52*	
Caucasian	65.0	74.6	2.97	
African American	22.0	13.2	3.62	
Hispanic American	7.9	9.6	0.27	
Exclusivity agreement	93.2	85.1	5.11*	
Participant is exclusive	91.0	80.7	6.43**	
Forgave partner	98.9	96.5	1.94	
Told partner forgiven	62.7	60.5	0.14	

Note. *$p \leq .05$, ** $p \leq .01$, ‡$p \leq .001$

[a] ANOVA sex comparison of continuous variables, [b] $t(206) = -1.07$, $p > .05$, [c] Dispositional Forgiveness of Others: Absence of Negativity, [d] Dispositional Forgiveness of Others: Presence of Positive, [e] Dispositional Forgiveness of Others, [f] Forgiveness of Partner: Absence of Negativity, [g] Forgiveness of Partner: Presence of Positive, [h] Dispositional Forgiveness of Partner, [i] Severity of Transgression—Emotional Distress, [j] Psychological abuse: Since forgiveness, [k] $t(161) = -1.48$, $p > .05$, [l] ($n = 177$), [m] ($n = 114$)

Continuous variables were placed in a two-group MANOVA (male, female) that uncovered several between-group differences, as well as an overarching between-group

difference, Hotelling's Trace = .46, $F(17,235) = 6.34$, $p \leq .001$, $\eta_p^2 = .31$[1]. As seen in Table 2, females reported more prevalent stress-related symptoms, higher levels of emotional distress subsequent to the most offensive act done by their partner, and higher levels of assertiveness. On average, males reported they were one year older, had an extra semester of college, had higher levels of DFO absence of negativity, and reported receiving more psychological abuse in the past year. No sex difference was found on an independent samples t-test for either relationship length or psychological abuse since forgiveness[2]. As seen in Table 6, a high level of social desirability was associated with reporting a low level of stress-related symptoms, as well as high levels of forgiveness, FQOL and PQOL in both sexes. Social desirability had a moderate inverse relationship with abuse received by females only, which showed those with a high level of social desirability reported receiving less abuse.

Research Question 1

Our first test investigated the relationship between the current level of forgiveness granted for a partner's most offensive transgression (FPT) and measures of dispositional forgiveness (i.e., DFO and DFP). Since some transgressions appeared to cause more distress than others, I held constant the degree of distress felt after the partner's transgression occurred. All partial correlations were statistically significant among both sexes. The FPT-DFP relationship was no stronger than the FPT-DFO relationship for neither females DFP $r = .48$ vs. DFO $r = .33$,

[1] Eta-squared is an effect size measure that is used to show the amount of variance explained by categorical variables. It examines effect variance divided by total variance in the outcome variable. Comparatively, partial eta-squared is an effect-size measure that removes variance explained by other effects measured in the analysis. It is calculated by taking the proportion of variance in the equation attributable to the effect divided by the effect variance + error variance. Either effect size can be used for linear or non-linear relationships.

[2] Relationship Length and Psychological Abuse Since Forgiveness sex comparisons were both completed using *t*-tests, rather than being included in the MANOVA in order to maximize the number of participants available for the calculation of Hotelling's Trace via a MANOVA.

$z = 1.68$, $p > .05$; nor males, DFP $r = .42$ vs. DFO $r = .25$, $z = 1.43$, $p > .05$, in a two-tailed R-Z correlation comparisons. A disposition to forgive one's partner and a disposition to forgive thers in general were both related to the amount of forgiveness granted after a major transgression.

Research Question 2

The second analysis inquired whether dispositional forgiveness was associated with higher or lower levels of psychological abuse in the past year. This question is novel, since there are two competing theories found in the forgiveness literature. Correlations between levels of psychological abuse[3] received and forgiveness variables are presented in Table 3. In general, participants who reported a high level of forgiveness also reported receiving a relatively lower level of abuse than did participants who reported a low level of forgiveness. This pattern held more strongly among female reports of DFP than among male reports, $z = -2.18$, $p \leq .05$. Females who reported high levels of DFO received a relatively lower level of psychological abuse than did females with low levels of DFO; DFO was unrelated to abuse in males. By contrast, there was no difference between males and females for the DFO-abuse correlation, $z = -1.69$, $p > .05$.

To ensure that the forgiveness-abuse relationship sex-differences found in the sample were true differences and not artifacts of sex-group differences, I conducted analyses to control for salient between-group differences in assertiveness. After partialling out assertiveness the correlation between DFP-abuse remained moderately-strong for females, $r = -.45$, $p \leq .001$, whereas it became non-significant for males, $r = -.17$, $p > .05$. Therefore, the male-female correlation difference remained after controlling for the influence of assertiveness, $z = -2.58$,

[3] R-Z transformations comparisons found no differences in the strengths or directionality of relationships between forgiveness and individual components of psychological abuse. Therefore, only correlations between forgiveness and the full abuse scale are presented.

$p \leq .01$. By contrast, the DFO-abuse relationship narrowly missed the critical z-value for the size difference between correlations for females, $r = -.23$, $p \leq .01$, and males, $r = .00$, $p > .05$, after partialling out the effect of assertiveness, $z = -1.93$, $p > .05$.

Another sex difference noted was that males reported higher levels of abuse received than did females. In order to eliminate the possible influence of oversampling females with low levels of abuse from the population, I removed the 36 females with the lowest levels of abuse from the sample and recalculated the correlations. There was no statistical difference between males and females for amount of abuse reported subsequent to adjustment, $t(215) = 1.50$, $p > .05$; however, a one-tailed R-Z transformation correlation comparison found that the sex-difference remained for the DFP-abuse relationship, $z = -1.78$, $p < .05$. The DFO-abuse relationship remained significant for females, $r = -.18$, $p \leq .05$, yet it was no longer significantly larger than the DFO-abuse relationship for males, $z = -1.11$, $p > .05$.

Table 3

Forgiveness & Abuse Correlations

	DFO[a]	DFP[b]
Psychological Abuse-Females	-.24‡	-.47‡
Psychological Abuse-Males	-.04	-.24**

	DFO- [c]	DFO+ [d]	DFP- [e]	DFP+[f]
Psychological Abuse-Females	-.26‡	-.16*	-.51‡	-.22**
Psychological Abuse-Males	-.04	-.02	-.33‡	-.01

Note. [NS] $p > .05$, *$p \leq .05$, ** $p \leq .01$, [‡]$p \leq .001$. Sample sizes: Female ($N = 177$), Male ($N = 114$)
[a] Dispositional Forgiveness of Others; [b] Dispositional Forgiveness of Partner; [c] Dispositional Forgiveness of Others: Lack of Negativity, [d] Dispositional Forgiveness of Others: Positive, [e] Dispositional Forgiveness of Partner: Absence of Negativity, [f] Forgiveness of Partner: Presence of Positive

Research Question 3

The third analysis inquired how components of dispositional forgiveness of partner (i.e., absence of negativity and presence of positive) and psychological abuse were related. A

correlation matrix is presented in Table 3. Forgiveness and abuse stand in an inverse relationship. AN and PP have a moderate-strong correlation with one another, $r = .45$, $p < .001$; however, strength of the correlations between abuse and each component differ. High levels of DFP absence of negativity (DFP-AN) were more strongly related to low levels of abuse received than was DFP presence of positive (DFP-PP) for both females, $z = -3.16$, $p \leq .01$, and males, $z = -2.48$, $p \leq .05$. By contrast, no size difference was found between absence of negativity DFO and presence of positive DFO among either females, $z < -0.98$, $p > .05$, or males, $z < -0.14$, $p > .05$.

Research Question 4

A fourth research question looked at whether FPT would predict instances of subsequent psychological abuse per month. To control for the influence of both the severity of the transgression and length of time since the abuse was forgiven, these variables entered into the first block of a hierarchical regression equation. Four participants were excluded from the analyses because they reported their partner has not been offensive, and another 15 were excluded because of missing data. Amount of forgiveness granted at the time of forgiveness was then entered into the second block. The full equation was run for each sex.

The vast majority of participants reported receiving psychological abusive since forgiving their partner for his/her most severe offense; only two females, and no males denied subsequent abuse. The bottom quartile of females reported 2-29 abusive acts, whereas the top quartile reported 143-2,341 abusive acts per month. The bottom quartile of males reported 1-29 abusive acts, whereas the top quartile reported 186-2,174 abusive acts per month.

Other results are listed in Table 4. In Block 1, neither emotional distress nor time since forgiveness were predictive of abusive acts received after forgiveness for either females,

R^2 = .02, $F(2,165) = 1.30$, $p > .05$; or for males R^2 = .03, $F(2,97) = 1.55$, $p > .05$. After the addition of Block 2, a higher degree of forgiveness granted was related to lower levels of subsequent abuse for females, $R^2\Delta = .03$, $F\Delta = 5.52$, $p \leq .05$, but not for males, $R^2\Delta = .00$, $F\Delta = 0.44$, $p > .05$. Strength of zero-order correlations between predictor variables and amount of abuse since forgiveness mirrored the effect size and direction of the regression weights. For both gender groups, only amount of forgiveness granted by females was correlated with abuse since forgiveness, $r(176) = -.18$, $p \leq .05$.

Table 4

Prediction of Abuse since Forgiveness

	Female			Male		
Predictor Variables	b[a]	β[b]	t	b[a]	β[b]	t
ST-ED[c]	6.19	.10	1.29	15.87	.14	1.38
Time since forgiveness	5.86	.07	.91	10.24	.07	0.67
Block 1	R^2 = .02, $F(2,165) = 1.30$			R^2 = .03, $F(2,97) = 1.50$		
ST-ED[c]	2.05	.03	0.40	13.74	.12	1.14
Time since forgiveness	8.43	.10	1.31	9.88	.07	0.64
FPT[d]	-21.62	-.20	-2.35*	-10.78	-.06	-0.59
Block 2	$R^2\Delta = .03$, $F\Delta = 5.52$*			$R^2\Delta = .00$, $F\Delta = 0.44$		
Final Model	R^2 = .05, $F(3,164) = 2.73$*			R^2 = .04, $F(3,96) = 1.14$		

Note. *$p \leq .05$, ** $p \leq .01$, ‡$p \leq .001$

[a] Unstandardized regression weight, [b] Standardized regression weight,

[c] Severity of Transgression—Emotional Distress, [d] Forgiveness of Partner's Transgression

Research Question 5

Hierarchical multiple regression equations to examine whether there was a hypothesized interaction effect between forgiveness and assertiveness, such that participants who reported high levels of both forgiveness and assertiveness experienced less psychological abuse than those with high levels of forgiveness and low levels of assertiveness. Hierarchical regression equations were used to answer this question. Block 1 contained DFP, Block 2 contained assertiveness, and Block 3 contained the interaction term for these two variables.

Analyses for both sexes are presented in Table 5. Block 1 yielded significant results for both females, $R^2 = .22$, $F(2,174) = 24.72$, $p \leq .001$; and males, $R^2 = .06$, $F(2,111) = 6.85$, $p \leq .01$. Higher levels of DFP were associated with lower levels of abuse received. The addition of assertiveness in Block 2 yielded a significant improvement in prediction for males, $R^2\Delta = .04$, $F\Delta = 5.26$, $p \leq .05$, but not for females, $R^2\Delta = .00$, $F\Delta = 0.52$, $p > .05$. Addition of the interaction term in Block 3 did not contribute significantly to prediction of abuse in either females, $R^2\Delta = .00$, $F\Delta = 1.57$, $p > .05$, or males, $R^2\Delta = .02$, $F\Delta = 2.29$, $p > .05$. As seen in Table 6, comparison between regression coefficients and zero-order correlations found that assertiveness was weakly related to abuse in females, although it became non-significant in the regression equation after controlling for DFP. Tolerance levels (0.90-0.99) indicated that these equations were not influenced by multicollinearity between predictor variables.

Table 5

Interaction of Forgiveness & Assertiveness in the Prediction of Abuse

	Psychological Abuse: Female			Psychological Abuse: Male		
Predictors	b[a]	β[b]	t	b[a]	β[b]	t
DFP[c]	-1.20	-.47	-7.05‡	-0.65	-.24	-2.62**
Block 1	$R^2 = .22$, $F(2,174) = 24.72$‡			$R^2 = .06$, $F(2,111) = 6.85$**		
DFP[c]	-1.16	-.46	-6.68‡	-0.47	-.17	-1.83
Assertiveness	-0.14	-.07	-0.99	-0.58	-.22	-2.29*
Block 2	$R^2\Delta = .00$, $F\Delta = 0.52$			$R^2\Delta = .04$, $F\Delta = 5.26$*		
DFP[c]	-1.18	-.46	-6.77‡	-.47	-.17	-1.84
Assertiveness	-0.12	-.06	-0.80	-.54	-.20	-2.15*
DFPxAssert[d]	0.02	.09	1.25	.03	.14	1.51
Block 3	$R^2\Delta = .00$, $F\Delta = 1.57$			$R^2\Delta = .02$, $F\Delta = 2.29$		
Final model	$R^2 = .23$, $F(3,173) = 17.49$‡			$R^2 = .12$, $F(3,110) = 4.93$**		

Note. *$p \leq .05$, ** $p \leq .01$, ‡$p \leq .001$

[a] Unstandardized regression coefficient, [b] Standardized regression coefficient, [c] Dispositional Forgiveness of Partner, [d] Interaction term: Dispositional Forgiveness of Partner X Assertiveness

Table 6

Zero-order Correlations between Regression Predictor and Criterion Variables

	Female					Male			
Variables	SRS[a]	PHC[b]	MHC[c]	Abuse		SRS[a]	PHC[b]	MHC[c]	Abuse
Caucasian	-.12	.13	.11	-.10		.05	-.18*	-.28**	-.03
Hispanic	.11	-.22**	-.28‡	.24‡		-.05	.14	.19*	-.05
Income ≤$40,000	-.13	.09	.20**	-.16*		-.04	.03	.07	.19*
Emotional closeness	-.12	.10	.14	-.09		-.22*	.21*	.13	.06
Social Desirability	-.21**	.26‡	.33‡	-.26‡		-.19*	.38‡	.35‡	-.06
DFP: AN[d]	-.36‡	.19*	.45‡	-.51‡		-.34‡	.28**	.56‡	-.33‡
DFP: PP[e]	-.20**	.14	.25‡	-.22**		-.06	.05	.16	-.01
Psychological Abuse Received	.29‡	-.14	-.37‡	----		.19*	-.14	-.23*	----
DFP[f]	-.35‡	.19**	.43‡	-.47‡		-.26**	.22*	.47‡	-.24**
Assertiveness	-.27**	.25**	.25**	-.16*		-.33‡	.31**	.46‡	-.27**

Note. *$p \leq .05$, ** $p \leq .01$, ‡$p \leq .001$

[a] Stress-related Symptoms, [b] Physical Health Component, [c] Mental Health Component, [d] Dispositional Forgiveness of Partner: Absence of Negativity, [e] Dispositional Forgiveness of Partner: Presence of Positive, [f] Dispositional Forgiveness of Partner

Research Question 6

The sixth set of analyses examined how the components of dispositional forgiveness of one's partner were related to health. I expected that DFP-PP would not contribute to the prediction of health beyond the influence of DFP-AN. Hierarchical regression equations were created to predict each of health variable (i.e., stress-related symptoms, physical health, and mental health). The first block of each equation controlled for the influence of demographic variables correlated with any of the three health outcomes (e.g., Hispanic American status and parental income ≤ $40,000/year for females, Caucasian American status for males; degree of emotional closeness to their partner for both genders). The second block contained absence of negativity (AN) so as to assess its relationship with health after eliminating the influence of demographic variables, while the third block contained presence of positive (PP) in order to see how it is related to health benefits beyond the influence of AN. Results are displayed in Table 7a for females and 7b for males.

Among females, Block 1 was not associated with stress-related symptoms, $R^2 = .04$, $F(3,173) = 2.38$, $p > .05$. However, Block 1 did predict both physical health $R^2 = .06$, $F(3,173) = 3.79$, $p \leq .01$, and mental health $R^2 = .13$, $F(3,173) = 8.43$, $p \leq .001$. Hispanic American females were less likely to show robust physical and mental health scores than females of other ethnicities. Female participants whose parents made less than $40,000 were more likely to have higher mental health scores than females from higher-income households. Emotional closeness was not significantly related to any health outcome measure. Addition of AN in Block 2 showed high levels of AN were clearly associated with lower levels of stress-related symptoms $R^2\Delta = .10$, $F\Delta = 20.49$, $p \leq .001$, and higher levels of mental health $R^2\Delta = .13$, $F\Delta = 30.69$, $p \leq .001$. No difference was found for the prediction of physical health after the addition of Block 2, $R^2\Delta = .02$, $F\Delta = 2.80$, $p > .05$. After PP was added to the equation in Block 3, it was unrelated to any health variable beyond the impact of AN, $R^2\Delta s = .00$, $F\Delta s \leq 0.61$, $p > .05$. Comparison between zero order correlations and regression weights found the correlation between AN and physical health became non-significant in a regression equation after controlling for demographic and relationship variables. In addition, the modest zero-order relationships between PP and the health indicators were diminished when looking only at the unique contribution of PP to prediction of health variables. Tolerance levels (0.74-0.99) indicated these results of these equations were not influenced by predictor multicollinearity.

Results of Block 1 for males demonstrated that ethnicity and emotional closeness did not predict stress-related symptoms, $R^2 = .05$, $F(2,111) = 2.86$, $p > .05$. However, Block 1 did predict physical health, $R^2 = .08$, $F(2,111) = 4.85$, $p \leq .01$; and mental health scores, $R^2 = .10$, $F(2,111) = 5.94$, $p \leq .01$. Caucasian Americans were less likely to experience robust physical and mental health than were minorities, whereas a high level of emotional closeness felt with partner

was associated with both better physical health scores and less intense stress-related symptoms than was a low level of emotional closeness. After being added to the equation in Block 2, a high level of AN predicted lower stress-related symptoms, $R^2\Delta = .09$, $F\Delta = 11.36$, $p \leq .001$; as well as better physical health, $R^2\Delta = .05$, $F\Delta = 6.89$, $p \leq .01$; and mental health, $R^2\Delta = .28$, $F\Delta = 50.05$, $p \leq .001$ than did low levels of AN. The addition of PP in Block 3 of the regression equations found that a high level of PP in participants was associated with a lower level of stress-related symptoms, $R^2\Delta = .03$, $F\Delta = 4.37$, $p \leq .05$, than found in those with a low level of PP. However, PP did not significantly contribute to the prediction of either physical health or mental health in males beyond the impact of AN, $R^2\Delta s = .02$, $F\Delta s \leq 3.17$, $p > .05$. Comparison between zero order correlations and regression weights found nearly total concordance. However, the relationship between PP and stress-related symptoms became significant after controlling for ethnicity, emotional closeness and AN, although the zero order correlation found no relationship. Tolerance levels (0.69-1.00) indicated the results of these equations were not influenced by multicollinearity between predictor variables.

Table 7a

Prediction of Health from Absence of Negativity and Presence of Positive Forgiveness in Females

	Stress-related Symptoms			Physical Health			Mental Health		
Predictors	b[a]	β[b]	t	b[a]	β[b]	t	b[a]	B[b]	t
HispAm[c]	7.98	.11	1.44	-5.87	-.21	-2.89**	-10.20	-.27	-3.85‡
≤$40K[d]	-5.50	-.12	-1.57	1.53	.09	1.18	4.51	.19	2.69**
Closeness[e]	-2.07	-.11	-1.40	0.56	.08	1.04	1.02	.10	1.44
Block 1	R^2 = .04, F(3,173) = 2.38			R^2 = .06, F(3,173) = 3.79**			R^2 = .13, F(3,173) = 8.43‡		
HispAm[c]	3.12	.04	0.58	-5.20	-.18	-2.51**	-7.43	-.20	-2.97**
≤$40K[d]	-3.50	-.08	-1.04	1.24	.07	0.96	3.37	.14	2.16*
Closeness[e]	-1.12	-.06	-0.79	0.43	.06	0.78	0.48	.05	0.73
DFP-AN[f]	-0.99	-.33	-4.53‡	0.14	.13	1.67	0.56	.38	5.54‡
Block 2	$R^2\Delta$ = .10, $F\Delta$ = 20.49‡			$R^2\Delta$ = .02, $F\Delta$ = 2.80			$R^2\Delta$ = .13, $F\Delta$ = 30.69‡		
HispAm[c]	3.15	.04	0.59	-5.20	-.19	-2.52**	-7.45	-.20	-2.98**
≤$40K[d]	-3.61	-.08	-1.07	1.31	.08	1.01	3.45	.15	2.20*
Closeness[e]	-1.04	-.05	-0.72	0.38	.05	0.69	0.42	.04	0.63
DFP-AN[f]	-0.93	-.32	-3.85‡	0.11	.10	1.17	0.52	.35	4.64‡
DFP-PP[g]	-0.22	-.04	-0.51	0.13	.06	0.78	0.16	.06	0.78
Block 3	$R^2\Delta$ = .00, $F\Delta$ = 0.26			$R^2\Delta$ = .00, $F\Delta$ = 0.60			$R^2\Delta$=.00, $F\Delta$ = 0.61		
Final Model	R^2 = .14, F(5,171) = 5.72‡			R^2 = .08, F(5,171) = 2.97**			R^2 = .26, F(5,171) = 12.16‡		

Note. *$p \leq .05$, ** $p \leq .01$, ‡$p \leq .001$

[a] Unstandardized regression coefficient, [b] Standardized regression coefficient, [c] Hispanic American, [d] Parent Income ≤$40,000, [e] Emotional closeness felt toward partner, [f] Dispositional Forgiveness of Partner: Absence of Negativity, [g] Dispositional Forgiveness of Partner: Presence of Positive

Table 7b

Prediction of Health with Absence of Negativity and Presence of Positive Forgiveness in Males

	Stress-related Symptoms			Physical Health			Mental Health		
Predictors	b[a]	β[b]	t	b[a]	β[b]	t	b[a]	B[b]	t
Caucasian[c]	1.86	.05	0.52	-2.93	-.19	-2.04*	-6.54	-.28	-3.12**
Closeness[d]	-3.75	-.22	-2.34*	1.53	.22	2.37*	1.40	.14	1.49
Block 1	R^2 =.05, F(2,111) = 2.86			R^2 = .08, F(2,111) = 4.85**			R^2 = .10, F(2,111) = 5.94**		
Caucasian[c]	1.16	.03	0.34	-2.71	-.17	-1.93	-5.80	-.25	-3.31‡
Closeness[d]	-2.68	-.15	-1.71	1.18	.17	1.84	0.25	.02	0.32
DFP-AN[e]	-0.71	-.31	-3.37‡	0.23	.24	2.63**	0.75	.54	7.08‡
Block 2	$R^2\Delta$ = .09, $F\Delta$ = 11.36‡			$R^2\Delta$ = .05, $F\Delta$ = 6.89**			$R^2\Delta$ = .28, $F\Delta$ = 50.05‡		
Caucasian[c]	0.89	.02	0.26	-2.62	-.17	-1.88	-5.68	-.24	-3.27‡
Closeness[d]	-3.72	-.22	-2.29*	1.53	.22	2.29*	0.71	.07	0.85
DFP-AN[e]	-0.93	-.40	-4.00‡	0.30	.32	3.13**	0.85	.61	7.16‡
DFP-PP[f]	0.80	.22	2.09*	-0.26	-.18	-1.70	-0.35	-.16	-1.78
Block 3	$R^2\Delta$ = .03, $F\Delta$ = 4.37*			$R^2\Delta$ = .02, $F\Delta$ = 2.89			$R^2\Delta$ = .02, $F\Delta$ = 3.17		
Final Model	R^2 = .17, F(4,109) = 5.63‡			R^2 = .16, F(4,109) = 5.07‡			R^2 = .40, F(4,109) = 17.92‡		

Note. *$p \leq .05$, ** $p \leq .01$, ‡$p \leq .001$

[a] Unstandardized regression coefficient, [b] Standardized regression coefficient, [c] Caucasian American, [d] Emotional closeness felt toward partner, [e] Dispositional Forgiveness of Partner: Absence of Negativity,
[f] Dispositional Forgiveness of Partner: Presence of Positive

Research Question 7

The seventh set of analyses used hierarchical multiple regression equations to examine how forgiveness and abuse of one's partner are related to health. I hypothesized that an interaction effect exists, such that participants who report low levels of abuse and high levels of forgiveness would experience better health on all three health measures than those who experience high levels of abuse and have low levels of forgiveness. As described previously, I controlled for salient demographic variables and emotional closeness for both sexes in Block 1. Block 2 contained psychological abuse, Block 3 contained DFP, and Block 4 contained the Abuse X DFP interaction term. Results of these analyses are presented in Tables 8a and 8b.

Results of the regression equation for females are shown in Table 8a. Block 1 contained Hispanic ethnicity, parental income and emotional closeness; results were identical to those found earlier. Block 1 did not statistically predict stress-related symptoms, although it did predict physical and mental health status. The addition of Block 2 improved the prediction of stress-related symptoms, $R^2\Delta = .06$, $F\Delta = 12.03$, $p \leq .001$; and mental health, $R^2\Delta = .08$, $F\Delta = 16.63$, $p \leq .001$; although it did not add to the prediction of physical health, $R^2\Delta = .01$, $F\Delta = 0.94$, $p > .05$. Thus, participants who reported lower levels of abuse received by their partner also reported lower levels of stress-related symptoms and better mental health than those participants who received higher levels of abuse. Addition of Block 3 into the equation found that participants who reported higher levels of DFP also experienced lower levels of stress-related symptoms, $R^2\Delta = .05$, $F\Delta = 10.09$, $p \leq .001$; and better mental health, $R^2\Delta = .07$, $F\Delta = 16.15$, $p \leq .001$; than found in those who reported lower levels of DFP. Neither abuse nor DFP were associated with physical health, $R^2\Delta = .01$, $F\Delta \leq 2.48$, $p > .05$. Addition of the interaction term in Block 4 did not improve the prediction of any health criterion, $R^2\Delta s = .01$, $F\Delta s \leq 1.12$, $p > .05$. Comparison between zero order correlations and regression weights found that after controlling for demographic variables and emotional closeness, forgiveness was no longer related to physical health. Tolerance levels (0.68-1.00) indicated the results of these equations were not influenced by multicollinearity between predictor variables.

As shown in Table 8b, results for the first block were identical to those found earlier among males. Block 1 did not statistically predict stress-related symptoms, although it did predict physical and mental health status. The addition of psychological abuse in Block 2 showed an improvement for prediction of stress-related symptoms, $R^2\Delta = .04$, $F\Delta = 5.21$, $p \leq .05$; and mental health, $R^2\Delta = .06$, $F\Delta = 7.69$, $p \leq .01$; but not for physical health, $R^2\Delta = .02$, $F\Delta = 2.96$,

$p > .05$. Participants who reported lower levels of abuse also noted better stress-related symptomology and mental health than found in those who reported higher levels of abuse. When Block 3 was added, higher levels of DFP predicted better mental health than found among those who had lower levels of DFP, $R^2\Delta = .15$, $F\Delta = 23.49$, $p \leq .001$; however, DFP did not add to the prediction of either stress-related symptoms, $R^2\Delta = .02$, $F\Delta = 2.90$, $p > .05$; or physical health, $R^2\Delta = .01$, $F\Delta = 1.74$, $p > .05$. The interaction term of abuse and DFP was not a significant predictor of male health indicators. Comparison between zero order correlations and regression weights found that DFP was no longer related to stress-related symptoms or physical health after controlling for ethnicity, emotional closeness and level of abuse received. Tolerance levels (0.84-1.00) indicated the results of these equations were not influenced by multicollinearity between predictors.

Table 8a

Interaction of Forgiveness & Abuse in the Prediction of Health for Females

	Stress-related Symptoms			Physical Health			Mental Health		
Predictors	b[a]	β[b]	t	b[a]	β[b]	t	b[a]	B[b]	t
HispAm[c]	7.98	.11	1.44	-5.87	-.21	-2.89**	-10.20	-.27	-3.85‡
≤$40K[d]	-5.50	-.12	-1.57	1.53	.09	1.19	4.51	.19	2.69**
Closeness[e]	-2.07	-.11	-1.40	0.56	.08	1.04	1.02	.10	1.44
Block 1	R^2 = .04, F(3,173) = 2.38			R^2 = .06, F(3,173) = 3.79**			R^2 = .13, F(3,173) = 8.43‡		
HispAm[c]	3.31	.05	0.60	-5.38	-.20	-2.57*	-7.61	-.20	-2.91**
≤$40K[d]	-3.59	-.08	-1.04	1.32	.08	1.02	3.45	.15	2.12*
Closeness[e]	-1.76	-.09	-1.22	0.53	.07	0.97	0.85	.09	1.25
Psych abuse[f]	0.23	.26	3.47‡	-0.02	-.08	-0.97	-0.13	-.29	-4.08‡
Block 2	$R^2\Delta$ = .06, $F\Delta$ = 12.03‡			$R^2\Delta$ = .01, $F\Delta$ = 0.94			$R^2\Delta$ = .08, $F\Delta$ = 16.63‡		
HispAm[c]	1.90	.03	0.35	-5.11	-.19	-2.44*	-6.78	-.18	-2.69**
≤$40K[d]	-3.26	-.07	-0.97	1.26	.07	0.97	3.26	.14	2.09*
Closeness[e]	-0.99	-.05	-0.69	0.38	.05	0.70	0.40	.04	0.60
Psych abuse[f]	0.13	.15	1.84	-0.01	-.02	-0.20	-0.07	-.16	-2.10*
DFP[g]	-0.57	-.26	-3.18**	0.11	.13	1.57	0.34	.30	4.02‡
Block 3	$R^2\Delta$ = .05, $F\Delta$ = 10.09‡			$R^2\Delta$ = .01, $F\Delta$ = 2.48			$R^2\Delta$ = .07, $F\Delta$ = 16.15‡		
HispAm[c]	1.25	.02	0.23	-5.34	-.19	-2.54**	-7.08	-.19	-2.79**
≤$40K[d]	-3.02	-.07	-0.90	1.35	.08	1.04	3.36	.14	2.15*
Closeness[e]	-0.83	-.04	-0.58	0.44	.06	0.80	0.47	.05	0.71
Psych abuse[f]	0.09	.11	1.15	-0.02	-.06	-0.63	-0.09	-.20	-2.35*
DFP[g]	-0.57	-.26	-3.15**	0.11	.14	1.60	0.34	.30	4.04‡
PAb X DFP[h]	-0.01	-.10	-1.06	0.00	-.09	-1.00	0.00	-.08	-1.06
Block 4	$R^2\Delta$ = .01, $F\Delta$ = 1.12			$R^2\Delta$ = .01, $F\Delta$ = 1.00			$R^2\Delta$ = .01, $F\Delta$ = 1.12		
Final Model	R^2 = .16, F(6,170) = 5.32‡			R^2 = .09, F(6,170) = 2.65*			R^2 = .28, F(6,170) = 10.90‡		

Note. *$p \leq .05$, ** $p \leq .01$, ‡$p \leq .001$

[a] Unstandardized regression coefficient, [b] Standardized regression coefficient, [c] Hispanic American, [d] Parent Income ≤$40,000, [e] Emotional closeness felt toward partner, [f] Psychological abuse, [g] Dispositional Forgiveness of Partner, [h] Interaction term: Psychological Abuse X Dispositional Forgiveness of Partner

Table 8b

Interaction of Forgiveness & Abuse Predicting Health-Males

	Stress-related Symptoms			Physical Health			Mental Health		
Predictors	b[a]	β[b]	t	b[a]	β[b]	t	b[a]	B[b]	t
Caucasian[c]	1.86	.05	0.52	-2.93	-.19	-2.03*	-6.54	-.28	-3.12**
Closeness[d]	-3.75	-.22	-2.34*	1.53	.22	2.37*	1.40	.14	1.49
Block 1	R^2 = .05, F(2,111) = 2.86			R^2 = .08, F(2,111) = 4.85**			R^2 = .10, F(2,111) = 5.94**		
Caucasian[c]	2.08	.05	0.59	-3.00	-.19	-2.10*	-6.69	-.29	-3.28‡
Closeness[d]	-3.98	-.23	-2.52**	1.60	.23	2.49**	1.55	.15	1.71
Psych abuse[e]	0.13	.21	2.28*	-0.04	-.16	-1.72	-0.09	-.24	-2.77**
Block 2	$R^2\Delta$ = .04, $F\Delta$ = 5.21*			$R^2\Delta$ = .02, $F\Delta$ = 2.96			$R^2\Delta$ = .06, $F\Delta$ = 7.69**		
Caucasian[c]	1.79	.05	4.56‡	-2.91	-.18	-2.04*	-6.25	-.27	-3.36‡
Closeness[d]	-3.05	-.18	-1.84	1.30	.18	1.93	0.15	.02	0.17
Psych abuse[e]	0.10	.16	1.75	-0.03	-.12	-1.30	-0.05	-.13	-1.60
DFP[f]	-0.27	-.17	-1.70	0.09	.13	1.32	0.41	.42	4.85‡
Block 3	$R^2\Delta$ = .02, $F\Delta$ = 2.90			$R^2\Delta$ = .01, $F\Delta$ = 1.74			$R^2\Delta$ = .15, $F\Delta$ = 23.49‡		
Caucasian[c]	1.77	.05	0.50	-2.91	-.18	-2.03*	-6.27	-.27	-3.36‡
Closeness[d]	-2.99	-.17	-1.79	1.31	.19	1.93	0.20	.02	0.22
Psych abuse[e]	0.10	.17	1.77	-0.03	-.12	-1.25	-0.05	-.13	-1.50
DFP[f]	-0.27	-.17	-1.69	0.09	.13	1.32	0.41	.42	4.84‡
PAb X DFP[g]	0.00	.03	0.34	0.00	.02	0.19	0.00	.04	0.51
Block 4	$R^2\Delta$ = .00, $F\Delta$ = .11			$R^2\Delta$ = .00, $F\Delta$ = 0.04			$R^2\Delta$ = .00, $F\Delta$ = 0.26		
Final Model	R^2 = .12 , F(5,108) = 2.85*			R^2 = .12, F(5,108) = 2.91*			R^2 = .31, F(5,108) = 9.57‡		

Note. *$p \leq .05$, ** $p \leq .01$, ‡$p \leq .001$

[a] Unstandardized regression coefficient, [b] Standardized regression coefficient, [c] Caucasian American, [d] Emotional closeness felt toward partner, [e] Psychological abuse, [f] Dispositional Forgiveness of Partner, [g] Interaction term: Psychological Abuse X Dispositional Forgiveness of Partner

Research Question 8

The final research question investigated whether there was a hypothesized interaction effect between forgiveness and assertiveness, such that participants who report high levels of both forgiveness and assertiveness experience better health on all three health outcomes than those with high levels of forgiveness and low levels of assertiveness. Three hierarchical multiple regression equations were conducted to predict health. Again, the first block contained the

Hispanic American ethnicity and parental income for females, Caucasian ethnicity for males, and emotional closeness in the participant's relationship for both sexes. Block 2 contained DFP. Block 3 contained partner-specific assertiveness, and the last block contained the interaction term for DFP and assertiveness.

Results for females are shown in Table 9a. Block 1 was identical to that of other research questions predicting health indicators. Block 2 added to the prediction of stress-related symptoms, $R^2\Delta = .10$, $F\Delta = 19.12$, $p \leq .001$; and MHC, $R^2\Delta = .13$, $F\Delta = 29.27$, $p \leq .001$, but not to prediction of PHC. Participants who reported higher levels of DFP had lower levels of stress-related symptoms and better mental health than did those who reported lower levels of DFP. Participants with higher levels of assertiveness reported lower levels of stress-related symptoms, as well as better PHC and MHC than did participants with lower levels of assertiveness. The addition of Block 4 did not improve the prediction of any of the three health variables, $R^2\Delta$s = .00, $F\Delta$s ≤ 0.25, $p > .05$. Comparison between regression coefficients and zero-order correlations found DFP was no longer related to physical health after controlling for the influence of demographics and emotional closeness. Tolerance levels (0.88-1.00) indicated the results of these equations were not influenced by predictor multicollinearity.

Results for predicting health criteria in males are listed in Table 9b. As demonstrated previously, Block 1 did not add to prediction of stress-related symptoms, although it did not add significantly to the prediction of physical health and mental health. The addition of Block 2 added to the prediction of stress-related symptoms, $R^2\Delta = .04$, $F\Delta = 29.27$, $p \leq .05$, and mental health, $R^2\Delta = .19$, $F\Delta = 29.77$, $p \leq .001$, but not to the prediction of PHC. Participants with higher levels of DFP experienced fewer stress-related symptoms and better mental health than

found in those with low levels of DFP. Block 3 contributed to the prediction of better health on all three variables: stress-related symptoms $R^2\Delta = .04$, $F\Delta \leq 7.17$, $p \leq .01$, physical health $R^2\Delta = .04$, $F\Delta = 7.38$, $p \leq .01$, and mental health, $R^2\Delta = .02$, $F\Delta = 4.33$, $p \leq .05$. Participants with high levels of assertiveness reported better health on all three measures than was found among those with low levels of assertiveness. Block 4 did not contribute to the prediction of any of the health variables, $R^2\Delta s \leq .01$, $F\Delta s \leq 0.76$, $p > .05$. Comparison between regression weights and zero-order correlations found parity; relationships between both forgiveness and assertiveness with health remained uninterrupted after controlling for ethnicity and emotional closeness in the relationship. Tolerance levels (0.88-1.00) indicated the results of these equations were not influenced by multicollinearity between predictor variables.

Table 9a

Interaction of Forgiveness & Assertiveness Predicting Health-Females

	Stress-related Symptoms			Physical Health			Mental Health		
Predictors	b[a]	β[b]	t	b[a]	β[b]	T	b[a]	B[b]	t
HispAm[c]	7.98	.11	1.44	-5.87	-.21	-2.89**	-10.20	-.27	-3.85‡
≤$40K[d]	-5.50	-.12	-1.57	1.53	.09	1.19	4.51	.19	2.69**
Closeness[e]	-2.07	-.11	-1.40	0.56	.08	1.04	1.02	.10	1.44
Block 1	R^2 = .04, F(3,173) = 2.38			R^2 = .06, F(3,173) = 3.79**			R^2 = .13, F(3,173) = 8.43‡		
HispAm[c]	3.72	.05	0.69	-5.18	-.19	-2.52**	-7.74	-.21	-3.10**
≤$40K[d]	-4.06	-.09	-1.21	1.29	.08	1.01	3.68	.16	2.36*
Closeness[e]	-0.94	-.05	-0.66	0.38	.05	0.69	0.37	.04	0.56
DFP[f]	-0.71	-.32	-4.22‡	0.12	.14	1.85	0.41	.37	5.41‡
Block 2	$R^2\Delta$ = .10, $F\Delta$ = 19.12‡			$R^2\Delta$ = .02, $F\Delta$ = 3.41			$R^2\Delta$ = .13, $F\Delta$ = 29.27‡		
HispAm[c]	3.72	.05	0.68	-5.13	-.19	-2.55**	-7.70	-.21	-3.11**
≤$40K[d]	-3.37	-.07	-0.99	0.99	.06	0.78	3.40	.15	2.19*
Closeness[e]	-0.02	.00	0.12	-0.05	-.01	-0.10	-0.04	.00	-0.05
DFP[f]	-0.68	-.31	-4.01‡	0.10	.11	1.46	0.39	.35	5.10‡
Assertiveness	-0.22	-.18	-2.68*	0.09	.21	2.72**	0.13	.15	2.08*
Block 3	$R^2\Delta$ = .04, $F\Delta$ = 7.17**			$R^2\Delta$ = .04, $F\Delta$ = 7.38**			$R^2\Delta$ = .02, $F\Delta$ = 4.33*		
HispAm[c]	3.42	.05	0.65	-5.20	-.19	-2.57**	-7.66	-.21	-3.09**
≤$40K[d]	-3.27	-.07	-0.98	0.99	.06	0.78	3.39	.15	2.18*
Closeness[e]	0.27	.01	0.18	-0.02	-.00	-0.03	-0.05	-.01	-0.08
DFP[f]	-0.66	-.30	-4.03‡	0.09	.11	1.40	0.39	.35	5.08‡
Assertiveness	-0.36	-.20	-2.60**	0.15	.21	2.75**	0.13	.14	2.04*
DFP X Assert[g]	0.00	.04	0.49	0.00	.04	0.50	0.00	-.01	-0.20
Block 4	$R^2\Delta$ = .00, $F\Delta$ = 0.24			$R^2\Delta$ = .00, $F\Delta$ = 0.25			$R^2\Delta$ = .00, $F\Delta$ = 0.04		
Final Model	R^2 = .17, F(6,170) = 5.87‡			R^2 = .12, F(6,170) = 3.84‡			R^2 = .27, F(6,170) = 10.46‡		

Note. *$p \leq .05$, ** $p \leq .01$, ‡$p \leq .001$

[a] Unstandardized regression coefficient, [b] Standardized regression coefficient, [c] Hispanic American, [d] Parent Income ≤$40,000, [e] Emotional closeness felt toward partner, [f] Dispositional Forgiveness of Partner, [g] Interaction term: Dispositional Forgiveness of Partner X Assertiveness

Table 9b

Interaction of Forgiveness & Assertiveness Predicting Health-Males

	Stress-related Symptoms			Physical Health			Mental Health		
Predictors	b[a]	β[b]	t	b[a]	β[b]	T	b[a]	B[b]	t
Caucasian[c]	1.86	.05	0.52	-2.93	-.19	-2.04*	-6.54	-.28	-3.12**
Closeness[d]	-3.75	-.22	-2.34*	1.53	.22	2.37*	1.40	.14	1.49
Block 1	R^2 = .05, F(2,111) = 2.86			R^2 = .08, F(2,111) = 4.85**			R^2 = .10, F(2,111) = 5.94**		
Caucasian[c]	1.55	.04	0.44	-2.84	-.18	-1.98*	-6.13	-.26	-3.28‡
Closeness[d]	-2.62	-.15	-1.58	1.17	.17	1.75	-0.06	-.01	-0.06
DFP[e]	-0.35	-.22	-2.25*	0.11	.17	1.74	0.45	.46	5.46‡
Block 2	$R^2\Delta$ = .04, $F\Delta$ = 5.05*			$R^2\Delta$ = .03, $F\Delta$ = 3.02			$R^2\Delta$ = .19, $F\Delta$ = 29.77‡		
Caucasian[c]	0.98	.02	0.27	-2.61	-.17	-1.87	-5.67	-.24	-3.25**
Closeness[d]	-2.30	-.13	-1.44	1.06	.15	1.61	-0.29	-.03	-0.36
DFP[e]	-0.22	-.14	-1.43	0.06	.10	0.99	0.36	.36	4.46‡
Assertiveness	-0.43	-.27	-2.90‡	0.16	.24	2.60**	0.33	.34	4.28‡
Block 3	$R^2\Delta$ = .07, $F\Delta$ = 8.39**			$R^2\Delta$ = .05, $F\Delta$ = 6.74**			$R^2\Delta$ = .10, $F\Delta$ = 18.29‡		
Caucasian[c]	0.56	.01	0.16	-2.47	-.16	-1.75	-5.64	-.24	-3.20**
Closeness[d]	-2.33	-.13	-1.45	1.07	.15	1.62	-0.29	-.03	-0.36
DFP[e]	-0.22	-.14	-1.43	0.06	.10	0.99	0.36	.36	4.44‡
Assertiveness	-0.42	-.26	-2.80**	0.15	.23	2.50**	0.32	.34	4.23‡
DFP X Assert[f]	0.01	.08	0.87	0.00	-.07	-0.82	0.00	-.01	-0.15
Block 4	$R^2\Delta$ = .01, $F\Delta$ = 0.76			$R^2\Delta$ = .01, $F\Delta$ = 0.68			$R^2\Delta$ = .00, $F\Delta$ = 0.02		
Final Model	R^2 = .16, F(5,108) = 4.17‡			R^2 = .16, F(5,108) = 4.18**			R^2 = .39, F(5,108) = 13.89‡		

Note. *$p \leq .05$, ** $p \leq .01$, ‡$p \leq .001$

[a] Unstandardized regression coefficient, [b] Standardized regression coefficient, [c] Caucasian American, [d] Emotional closeness felt toward partner, [e] Dispositional Forgiveness of Partner, [f] Interaction term: Dispositional Forgiveness of Partner X Assertiveness

DISCUSSION

The present study examined the relationships between forgiveness and psychological abuse, as well as the relationships among forgiveness, psychological abuse, and health. A review of the literature indicated that no previous research has investigated these relationships. All participants had dated their partner for at least two months and were heterosexual. In terms of their dating relationship, most participants had contact with their partner at least once per day and were in a sexually exclusive relationship.

Among the variables used in analyses, there were a number of noticeable sex differences. Females were more assertive than males, which is consistent with findings from satisfactorily married females (O'Leary & Curley, 1986), although other work has shown that males and females married to one another exhibit similar levels of assertiveness, especially among discordant or physically abusive couples (O'Leary & Curley, 1986; Rosenbaum & O'Leary, 1981). Males reported that they typically received more psychological abuse from their partners than did females. Literature on psychological abuse rates are inconsistent about which sex exhibits the most psychologically abusive behavior (Hammock & O'Hearn, 2002; Ryan, 1998; Stets, 1990). One important consideration is that high levels of socially desirability was associated with lower reports of abuse for females, but not males—perhaps females minimized their estimates of abuse they receive so as not to appear "abnormal" on the survey, whereas males did not.

Social desirability may have played a role in participant reporting strategies. Weak to moderate correlations were found that link high levels of social desirability to better health and higher levels of forgiveness. It is very common for forgiveness measures to be correlated with social desirability, although the measures included in this study have been created to reduce the

size of the relationship with social desirability in ways that do not interfere with the relationships between forgiveness and socially valid constructs, such as mental health and stress (Rye et al., 2003; Yamhure-Thompson et al., 2005). Additionally, forgiveness has been described as being an inherently socially desirable personality trait (Rye et al., 2001), which can be explained by the explicit connections between forgiveness and the spiritual traditions that have shaped modern societies, from Buddhist and Hindu traditions to Judeo-Christian history (Rye et al., 2000).

Psychologically abusive acts include the use of controlling and/or aggressive strategies (Murphy & Hoover, 1999; Kasain & Painter, 1992) and occur in up to 60% of dating relationships (Hall-Smith et al., 2002; Lewis & Fremouw, 2001). By contrast, forgiveness is a response to an offense where by an injured party approaches his or her transgressor with respect, if not compassion and warmth. Common definitions include a shift from negative to positive thoughts, feelings, and action tendencies toward the offender (Enright, 2001; Mauger, 1992; Worthington, 2001).

This study used three different measures of forgiveness: dispositional forgiveness of others (DFO), dispositional forgiveness of partner (DFP), and Forgiveness of a Partner's specific Transgression (FPT). Research Question 1 investigated whether these three measures had concurrent validity. After controlling for severity of transgression, FPT was related to DFO and DFP for both males and females. As may be expected, a person-specific disposition to forgive one's partner tended to be more strongly related to actual forgiveness of a partner's worst transgression than was a general disposition to forgive others, although this trend was not significant for males. The data supported the basic assumption that all three measures were distinct, yet related.

Forgiveness appears to be context-specific. The way a participant typically reacts toward a partner after a transgression accounted for less than 25% of the variance in how he or she actually reacted to a particular highly offensive act.

Abuse & Forgiveness: How are they Related?

According to existing theory and research, the relationship between forgiveness and psychological abuse could manifest in either of two different and conflicting ways. First, people who are forgiving could have a positive outlook toward a partner who is abusive, yet still be at risk of receiving future offenses. Conflict resolution strategies are learned interpersonal behaviors (Reese-Weber & Kahn, 2005). Under a behavioral rubric, forgiveness could be perceived as an endorsement of an aggressor's abusive behavior and intermittently reinforcing his or her partner's abusive inclinations, which would be associated with further abuse in the future (Alessio, 1984).

There has been research related to forgiveness and abuse, be it physical or psychological, but none that looks at how forgiveness is directly related to abuse. One study looked at post-relationship forgiveness-based therapy of emotionally abusive partners (Reed & Enright, 2006), another examined factors that predispose people to forgive abusive acts (Gauche & Mullet, 2005), and yet another looked at psychological correlates and predictors of forgiveness among victims of domestic violence (Coates, 1996). However, no previous research has investigated the relationship between forgiveness and rate of psychological abuse received in a current relationship. Published studies that examine the forgiveness-physical abuse relationship support a behavioral reinforcement conceptualization of the effects of forgiveness on abuse. Women who were more forgiving were also more likely to exhibit characteristics associated with repeated

victimization (i.e., low self-esteem, self-blame for their partner's abusive behavior), and they were more likely to stay in the relationship after being physically violated by their partner (Coop Gordon, Burton & Porter, 2004; Katz, Street, & Arias, 1997).

On the other side of the coin, extensive research on interpersonal theory (Horowitz, 1996; Orford, 1986) indicates that warm, affiliative behaviors evoke further affiliative behaviors from others, whereas cold and/or hostile behavior evokes reciprocal hostility. Using interpersonal theory as a template, partners who employ positive and respectful conflict resolution strategies would tend to evoke reciprocal respectful behavior from their partner. Empirical research has found that romantic partners who were more forgiving were also more likely to use constructive conflict resolution strategies (Karremans & Van Lange, 2004) and adaptive communication patterns (Fincham & Beach, 2002) than unforgiving partners. Therefore, participants who were more forgiving would be expected to evoke less frequent abuse from their partners than would unforgiving partners.

Disposition to Forgive Partner and Abus

To conduct the exploration as to which hypothesized link between forgiveness and abuse is more accurate, Research Question 2 asked how two forgiveness measures (DFO and DFP) were correlated with psychological abuse. In both males and females, those with higher levels of forgiveness received less abuse. In females, higher levels of both DFO and DFP were related to less abuse received, and for males, higher levels of DFP were associated with lower levels of abuse received.

The correlation found between abuse and forgiveness was modest for males, whereas, it was moderately-strong for females. There appear to be two possible explanations for the

difference in strength of the relationship between forgiveness and abuse: the difference may reflect a true sex difference in the population of dating couples or it may be the result of the idiosyncratic features of the present sample. For example, in the present sample, females scored higher on assertiveness than did males, whereas males reported that they received more psychological abuse than did females. However, the idiosyncratic explanation does not hold up after further analysis. After I controlled for level of assertiveness, the forgiveness-abuse sex-difference remained intact. In a separate analysis, I excluded 36 female participants who reported the least amount of abuse in order to remove the mean sex-difference on amount of abuse received. The forgiveness-abuse relationship sex-difference remained for DFP. The weak male-female difference found for the DFO-abuse relationship was non-significant after the removal of the 36 females; however, the DFO-abuse relationship itself remained significant among females. Although the relationship between DFP and abuse was stronger in females than males, I established that it appeared not to be an artifact due to sex differences in level of assertiveness nor psychological abuse received.

The interpersonal theory explanation of the relations between forgiveness and abuse was supported. The reduction in hostility and increase in warmth that occurs when a person is more forgiving appears to evoke lower levels of abuse from partners. The Interpersonal explanation suggests that psychological abuse would be less frequent in the general population if partners were able to be more forgiving of one another. Therefore, interventions that encourage forgiveness may be effective in reducing levels of psychological abuse found in the relationship. However, a second explanation must also be considered: participants who do not encounter as many abusive offenses are more likely to forgive their partner because their "forgiving resources" have not been repeatedly taxed after multiple offenses. The present data can not

answer which of these explanations is more accurate, but either longitudinal research or experimental methods in which forgiveness and/or abuse are manipulated, should be able to clarify the nature of the relationship between forgiveness and abuse.

Does the Forgiveness-Abuse Relationship Differ for Components of Forgiveness?

Forgiveness can be compartmentalized into two related, yet conceptually separate factors: Absence of Negativity (AN) and Presence of Positive forgiveness (PP; Rye et al., 2001; Subkoviak, Enright, Wu, 1995). AN has been more strongly related to lesser anger and depression, as well as greater hope and existential well-being than PP (Rye et al., 2001; Subkoviak, Enright, & Wu, 1995). PP has been related to religiosity and religious well-being to a greater extent than has absence of negativity (Rye, Folck, Heim, Olszewski, & Traina, 2004; Rye et al., 2001; Subkoviak, Enright, & Wu, 1995). Since the two factors are distinct, Research Question 4 examined how each relates to psychological abuse.

Our analyses found that DFP continued to show an inverse relationship to abuse received after being separated into its components, yet the strength of this relationship differs for the two components. High DFP-AN scores were strongly related to low levels of abuse received in the last year for both sexes. High DFP-PP scores in females showed a weak link to low abuse scores, but there was no link between DFP-PP and abuse in males.

These results suggest that researchers who study abuse would do well to consider both aspects of forgiveness, rather than assuming that absence of negativity and presence of positive forgiveness carry equal weight in their relationships with abuse. Researchers who examine other important relationship variables (such as relationship satisfaction, negotiation, divorce rates, or physical abuse) may also benefit by looking at the individual components of forgiveness.

Admittedly, there may be relationship benefits to developing presence of positive forgiveness toward one's partner; however, interventionists who want to reduce psychological abuse may find it easier and more efficacious to target a reduction in negativity.

Does Forgiveness of a Transgression Predict Level of Future Abuse?

In an attempt to approach the link between forgiveness and abuse in a couple's actual history together, Research Question 4 asked whether degree of forgiveness granted after a partner's most offensive act would predict subsequent instances of abuse received. The procedure controlled for severity of distress in reaction to the transgression and length of time since the abuse was forgiven. A higher degree of forgiveness granted was related to fewer instances of subsequent abuse received by females, but not by males. Again, this evidence provides support for the interpersonal theory explanation of how forgiveness and abuse were related for females.

One implication of the forgiveness-abuse relationship sex-difference found throughout this study is that there may have been gender-specific motives for psychological abuse. Although aggressive or controlling tactics may look very similar, these behaviors may have very different goals and consequences for males than found for females. Hence, a male partner may react differently to female forgiveness response than a female does in response to a male's forgiveness response. For example, male abusive behavior may be motivated by a desire to maintain a dominant position in the relationship, which would be challenged by hostility or nonverbal signs of resentment found in unforgiving females, regardless of how "justified" her actions may be. If a female forgives abusive behavior of a dominant male, her sense of peace with him and unwillingness to engage in further struggle may be treated as submission, which then may lead to

discontinuation of abuse. On the other hand, a female's abusive behavior may serve other interests, such as a sense of security or to garner social support. A forgiving response may be associated with affiliative behavior, yet a mere absence of negativity does not equate with either affection or reassurance. Therefore, her coercive behaviors may continue until the desired consequences are reached, even after a male's forgiving response. A difference in the motivations for psychological abuse delivered by males and females would help to explain why female forgiveness is more closely related to less abuse received from her male partner than in the relationship between male forgiveness and abuse received from his partner.

DFP and Assertiveness: Is Abuse Linked to the Combination of the Two?

Assertive behavior is the respectful verbal expression of one's feelings, opinions, or preferences (Leah, Law, & Snyder, 1979). Results from intervention studies show that couples who received assertiveness training were less likely to use aggression than were controls (Epstein, Degiovanni, & Jayne-Lazarus, 1978), and maltreated women who received assertiveness training were less likely to reenter previously abusive relationships than were those without such assertiveness training (Rinfret-Raynor & Cantin, 1997). Typically, psychological forgiveness interventions combine forgiveness with limited assertive action (Baskin & Enright, 2004; Hargrave, 2001; Worthington, 2001). Research Question 5 inquired how assertiveness was associated with lower levels of abuse, and I predicted there would be an interaction effect between assertiveness and forgiveness such that those who had high levels of both assertive and forgiving responses would receive the lowest levels of abuse.

Findings showed that high levels of DFP were strongly related to lower levels of abuse in both females and males; however, the relationship between DFP and abuse among males did not

meet significance criteria upon the entry of assertiveness in the second predictive model. Among females, neither higher levels of assertiveness, nor the Forgiveness X Assertiveness, interaction were related to abuse. Among males, higher levels of assertiveness was predictive of lower levels of abuse received, although the interaction term was not predictive of abuse. Comparison with the zero-order correlations were consistent for most variables, yet showed that assertiveness has a modest relationship with abuse received in females. Therefore, my expectation that forgiveness and assertiveness would have an interactive effect on amount of abuse received was not supported, although higher levels of each was at least modestly linked to lower levels of abuse received.

These findings indicate that those who learn either forgiveness or respectful assertiveness skills, may receive lower levels of psychological abuse from their partners, as indicated by Hargrave (2001) and Worthington (2001). However, it does not appear as if improving both skill sets simultaneously would result in noticeablely higher gains than could be found with either skill set alone, based on self-report descriptive measures. Previous research found that assertiveness training is associated with lower levels of physical and psychological abuse in clinical samples (Epstein, Degiovnni & Jayne-Lazarus, 1978), although no studies have been done that directly assess the combined value of forgiveness and assertiveness to date.

Forgiveness & Health

Health is ultimately an interaction of predisposing risk factors, stress, and coping (Cummings, 1999). Forgiveness is not only a coping mechanism in its own right, but it is often associated with other forms of adaptive coping (i.e., social support) that may reduce stress (Thoresen, 1999; Worthington, Berry & Parrot, 2001; Worthington & Scherer, 2004).

Forgiveness has been related to lower levels of physiological stress responses in short-term experiments (Lawler et al., 2003; Witvliet, 2001) although it has not been related to better physical health overall (Connery, 2002; Witvliet, Phipps, Feldman, & Beckham, 2004). However, forgiveness has been related to fewer stress-related symptoms (Lawler et al., 2005; Maltby, Day & Barber, 2004).

As for other indicators of health, quality of life is the perceived interference that health symptoms have on either physical functioning (i.e., functional quality of life—FQOL) or psychological functioning (PQOL; McHorney, Ware & Raczek, 1993). Forgiveness is moderately-strongly related to PQOL (Berry & Worthington, 2001), whereas the relationship found between forgiveness and FQOL has been weak (Toussaint et al., 2001) to moderate at best (Berry & Worthington, 2001).

Our study sought to advance forgiveness literature by trying to tease out the intricate relationship between forgiveness and health, as well as by looking at variables that have been neglected in health psychology literature, yet could act synergistically with forgiveness. First, I looked for any differential effects that the two components of forgiveness—absence of negativity and presence of positive forgiveness—may have upon health. Next, I attempted to account for amount of psychological abuse received, which may have weakened relations between forgiveness and health in previous studies. Finally, I examined the combinatorial effects of forgiveness and assertiveness, which have been combined in various forgiveness therapy procedures (Baskin & Enright, 2004; Hargrave, 2001; Worthington, 2001), but have not been included in previous health psychology research.

Does Presence of Positive Forgiveness Predict Health beyond Absence of Negativity?

Research Question 6 expands on the investigation of DFP factors by examining how each predicts health. Mixed results have been found in previous research regarding the importance of forgiveness components. Maltby, Macaskill, and Day (2001) found that a *failure to forgive others* was modestly related to higher levels of anxiety and depression in females, but not males, and was entirely unrelated to somatic symptoms in either sex. However, a follow-up study found that AN loaded with other forgiveness variables that was linked to better mental health and less intense psychosomatic symptoms (Maltby, Day & Barber, 2004). Furthermore, another team found that the link between forgiveness and less somatic symptoms was mediated by their common relationship with negative affect (Lawler et al., 2005). This study hypothesized that after controlling for demographic and relationship variables, AN would be related to all three measures of health, whereas PP would not contribute to the prediction of health beyond the effects of AN.

After controlling for demographic variables and emotional closeness, all of which were related to at least one health outcome variable, many hypothesized relations were found. AN was linked to less frequent stress-related symptoms and higher MHC in both sexes, as well as to higher FQOL in males. PP was unrelated to health in females and it was associated with only with one health indicator in males after being entered into the regression equation (i.e., fewer stress-related symptoms). By contrast, zero-order correlations between PP and health indicators showed that PP was related to both SRS and PQOL in females, while it was unrelated to any health indicators in males.

Therefore, PP appears to be linked to health in females, although its association to health is not unique after accounting for AN and demographic variables. By contrast, PP had no

relationship to any of the health variables; it became related to stress-related symptoms in males only after ethnicity and relationship closeness were entered into the equation. Of note, however, is that suppressor effects are not considered valid in situations where a non-significant correlations become significant in a subsequent regression equation after controlling for other variables (Darlington, 1986). Thus, a replication would need to confirm this result before drawing a conclusion about the relationship between PP and stress-related symptoms. The projected hypothesis in Research Question 6 was supported in most circumstances for both sexes.

No other study has examined the differential association between both forgiveness components and health. Contrary to Maltby, Day, and Barber (2001), who studied a conceptually similar construct to AN, it appears that an absence of negative forgiveness is an essential component to better health in both sexes. From a descriptive standpoint, one could infer that the relationship between AN and health would follow the rule of thumb that the more prevalent and intense one's distress and aggressive intentions, the more one's health suffers, as found in a meta-analysis by Kubazansky, Davidson, and Rozanski (2005). This rule could help to explain why negative affectivity mediated the relationship between high levels of dispositional forgiveness and lesser somatic symptoms (Lawler et al., 2005). By contrast, the links between positive affectivity and health have been inconsistent across studies and will require more sophisticated research methodology to identify contexts in which positive affect has an independent contribution to health (Pressman & Cohen, 2005) beyond the effects of the reduction of negative feelings and resentments.

From an applied standpoint, these findings suggest that patients who experience indicators of poor health (e.g., headaches, non-organic gastrointestinal distress, and/or poor

quality of life) may benefit from a forgiveness intervention if they are in a dating relationship. Such interventions have been described by Baskin and Enright (2004), as well as Rye and colleagues (Rye & Pargament, 2001; Rye et al., 2005). Further, it appears that an effective intervention designed to impact psychosomatic symptoms, mental health, or even physical health in males may be streamlined by concentrating on AN. Although PP may have other health benefits that were not measured in this study, it appears that focusing exclusively on abandoning hostility and promoting respectful treatment of one's partner would be associated with a change in symptomatology. Such a focus may be more practical and easily accepted by clients than would asking patients to also adopt a positive outlook toward a past transgression or to be compassionate toward their partner after a transgression—especially if the transgression was egregious.

How Do Abuse and Forgiveness Interact to Predict Health?

Psychological abuse has been associated with psychosomatic symptoms and stress-related illness (Pitzner and Drummond, 1997; Wagner & Mongan, 1998), poorer FQOL (Hall-Smith et al., 2002; Straight, Harper & Arias, 2003), and poor mental health, which can also be conceptualized as PQOL (Marshall, 2001). Research Question 7 investigated the relationship between forgiveness, abuse, and health. Consistent with previous literature, I hypothesized that higher levels of abuse would be associated with worse health, whereas higher levels of forgiveness would be associated with better health. In addition to the main effects of these predictors on health, I expected to find there is an interaction effect between forgiveness and abuse on health, such that participants with low levels of abuse and high levels of forgiveness would have more robust health than would other participants.

After controlling for demographic variables and emotional closeness, participants who reported higher levels of psychological abuse experienced more frequent stress-related symptoms and worse mental health than those who received lower levels of abuse. Additionally, high DFP scores in females were associated with a lower frequency of stress-related symptoms and better mental health than those with low DFP scores. High DFP scores were also associated with better mental health in males. The interaction term was not predictive of health indicators in either sex.

These results were not consistent with some of the positive, zero-order correlations between DFP and health, which could presumably be due to an overlapping contribution of control variables to the prediction of health. DFP was related to more robust health on all three health measures in zero-order correlations for both gender groups. However, the unique contribution of DFP to the prediction of FQOL became non-significant in both genders after controlling for the contributions of demographic and relationship variables. The same event occurred upon examination of the link between DFP and stress-related symptoms in males. There was no Forgiveness X Abuse effect on health measures. Therefore, the hypothesized main effects of abuse and forgiveness on health were partially supported after controlling for demographic variables and emotional closeness, whereas the proposed interaction effect was not.

Although the expected interaction effect was not found, these results have implications for the field of psychology. The present results indicate that the effects of abuse on health appear to be independent of a person's disposition to forgive their partner, although each was an important predictor of health. Accurate case conceptualization of young adult clients who experience stress-related symptoms and/or impaired functioning should perhaps include assessment of psychological abuse, as well as quality of their intimate relationship.

Forgiveness and Assertiveness: Is Health More Robust with a Combination of the Two?

Links between assertiveness and health have been demonstrated in several populations (Gupta, Gupta, Ellis, & Voorhees, 1990; Hogan & Linden, 2004; Larkin & Zayfert, 2004). Links between assertiveness training and QOL are positive when assertiveness is combined as part of an intervention package (Loo, 1982; Tkachuk, 2002); however, there have not been specific outcome studies that look at the health variables for combinations of forgiveness and assertiveness. Research Question 8 asked whether there would not only be direct links that connect both forgiveness and assertiveness with health, but also an indirect link via an interaction effect. I expected that participants who were both more forgiving and more assertive would also report more robust health than would others.

Results again showed that a high level of DFP was related to lower levels of stress-related symptoms and better mental health for both gender groups. High assertiveness scores were related to less frequent stress-related symptoms, as well as higher FQOL and PQOL than was found in either gender group among participants with low assertiveness scores. The Forgiveness X Assertiveness interaction term was not related to health indicators for either gender. Results of regression analyses were consistent with zero-order correlations. Therefore, my expectations were supported for the main effects of forgiveness and assertiveness in most cases, although the expected interaction did not occur.

The implications are evident. Both forgiveness and assertiveness appear to be associated with robust health, regardless of sex. Practitioners who serve a client with poor mental health or intense stress-relate symptoms, may find it beneficial to assess a client's interpersonal style in their intimate relationship (i.e., how forgiving and/or assertive they are with their partner). Clients with impaired FQOL due to their physical health may also find assertiveness training

useful. Any intervention specifically designed to improve health would likely benefit clients if it were to include either forgiveness and/or assertiveness training, although a high level of both does not appear to be necessary to receive health benefits.

LIMITATIONS

Although this study made many contributions to basic research supporting the field of psychology in the areas of abuse, health, forgiveness and assertiveness, I encountered limitations as well. The data were collected at one time-point using only self-report measures. Therefore, I can not state how the variables may be causally related. For example, I do not know if more forgiveness after abusive acts would be associated with lower levels of abuse or if people will only be forgiving as long as psychological abuse does not go above a specific threshold. Additionally, I do not know how participants' self-report bias may have influenced their responses. Hence, participants may have over- or under- reported psychological abuse received or how forgiving they are. Also of note, Forgiveness X Abuse interaction term looked at dispositional forgiveness of perceived offenses. Looking directly at dispositional forgiveness of *abusive acts* may unveil a different pattern of interaction than found with forgiveness of acts merely perceived of as offensive. Finally, the sample was recruited from a population of young adults who attend a large south-western university. I am not sure how forgiveness, psychological abuse, and health relationships would look among individuals who experience more serious impairment, higher levels of abuse, and/or individuals who are older.

RECOMMENDATIONS

Studies with a different research design, more specific measures, and an expanded sample would be recommended. Alternative research designs may help researchers discover causal links and eliminate any bias inherent in the current design. For example, an experimental design that uses observational measures can more easily assess the effects of a brief 15-minute forgiveness intervention in a laboratory setting. Outcomes measured could include the observed forgiveness strategies and actual change in abusive interactions observed from baseline to a later time-point. Additionally, I recommend that a measure be developed to assess forgiveness of different types of offenses. Although there are measures that examine forgiveness of a specific offense, forgiveness of a specific offense would not necessarily be the same as forgiveness of a class of offenses, such as aggressive acts, coercive acts, neglectful acts, etc. Therefore, developing a measure to assess forgiveness of psychologically abusive acts would be warranted to do an in-depth study of forgiveness-abuse link. Also, research should look at forgiveness components, not just forgiveness as a singular construct, given the clear indication that absence of negativity and presence of positive forgiveness are differentially related to health and abuse. Thus, either a clinical intervention or an experimental study would be appropriate to compare the effects of using strategies to reduce negativity to strategies that address both negativity and positivity, as well as a control group. In addition, the findings may not generalize to other samples drawn from more ethnically diverse and/or community samples that would include older individuals. Finally, dividing the sample by gender would allow for gender differences to be more easily discovered, such as the current gender-based difference found for strength of the relationship between forgiveness and DFP.

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